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EDITORIAL COMMENT AND NEWS NOTES

RESOLUTIONS OF THE CALIFORNIA SCHOOL SUPERVISORS' ASSOCIATION

The following resolutions were adopted at the annual Conference of California School Supervisors at Pasadena, October 4, 1940.

1. Inasmuch as the very foundations of American Democracy have been increasingly threatened during the last few months, causing the American people to prepare to defend this heritage as never before in the history of our country since its establishment, be it resolved that the members of this organization accept this challenge to American educators by redefining and reemphasizing the principles which underlie democracy as a way of life.

That there is need for such emphasis has been clearly indicated by the Educational Policies Commission of the National Educational Association and American Association of School Administrators in their Bulletin of August, 1940 wherein they picture for us the spread of totalitarian power in Europe and Asia.

2. As ardent supporters of the democratic way of life, we record our profound concern for the current world-wide threat to democracy, and pledge ourselves to the vigorous defense of democracy against all foes, both without and within our national borders.

While recognizing the necessity of military forces to protect us from attack, we believe that the public schools of America are not only the first line of defense of democracy but also its greatest hope for the future.

We believe all members of the educational profession, and especially those in positions of leadership, are challenged now as never before to study the implications of democracy for the organization and operation of schools.

We, therefore, pledge ourselves to the serious study of the meaning of democracy in school organization, administration, teaching methods, and above all, in school supervision. Urgently needed is critical study of every aspect of the work of the school and rejection of all practices which are basically autocratic in their influence.

3. Inasmuch as it is the duty of supervisors to help teachers to provide the very finest of learning situations for their children, be it resolved that the members of this organization work cooperatively with teachers to assure children experiences through which they may realize:

a. The right of the individual in a democracy to grow and develop to his highest capacity.

b. The deep and lasting satisfaction of freely making one's contribution of energy and ability to the common good in a group enterprise.

4. Inasmuch as teachers as well as children are in need of acquiring habits of democracy through living democratically, be it resolved that we as supervisors provide

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that opportunity by applying the principles stated in article (3) for working with children.

Following are criteria by which each one of us might judge his practices:

a. Do I regard the teachers with whom I work as free persons?
b. Do I respect their personalities by making it possible for them to use initiative and make their own unique contribution?
c. Have I arranged a stimulating environment, rich in materials and ideas?
d. Do I respect in teachers, and foster by example, cooperative attitudes, respect for the rights of others, independent thinking, and tolerance?

5. Inasmuch as modern education, based upon the principle of learning through living, and through the satisfaction of felt needs, is the only type of education essentially democratic, be it resolved that the members of this group foster in every way the modern program with its emphasis upon life experiences. This would mean defending the program by proving its worth to parents and laymen in every legitimate way primarily through the use of scientific evidence.

6. Inasmuch as adequate books are necessary to meet children's needs, be it resolved that the members of this organization pledge themselves to the securing of only the finest of texts.

7. In the State of California free textbooks are printed and supplied to the schools of the State. The law provides for professional evaluation of the textbooks submitted for State adoption by the Curriculum Commission. Inasmuch as an effective educational program depends upon the quality of its instructional material, this organization views with disfavor the action of the State Board of Education in disregarding the recommendations of the Curriculum Commission in regard to the recent State adoptions. We highly commend the courageous and persistent efforts of Superintendent Dexter in standing for strictly professional adoptions.

8. We deplore and condemn the current, unfair, and groundless attacks on certain textbooks which attempt to present a fair and comprehensive delineation of the basic realities of social, political, and economic life in America. Only through free and vigorous study of the conditions and problems of American life can democracy survive.

9. Inasmuch as there are in California more than one thousand school districts in which the assessed valuation is so low as to prevent the construction of adequate school buildings and inasmuch as the school buildings in most of these districts are below the standards of safety, sanitation, and educational servicibility then, be it resolved that this organization request the State Department of Education, the California Teachers' Association, and the California School Superintendents Association to seek further legislation to provide for the equalization of educational opportunities in establishing proper State funds to provide standard school buildings.

10. Inasmuch as there is a growing recognition of the importance of early childhood education and inasmuch as kindergarten education in California is limited to urban areas wealthy enough to support this type of educational opportunity, be it resolved that this organization go on record as favoring the incorporating of kindergarten education into the public school system of the State and allocating funds to its support on the same basis that the State uses in the support of elementary education.

11. Inasmuch as education is under attack from forces which are seeking to reduce the support of education, or which are seeking to deny educational opportunity in accord with the American way of life, be it resolved that this organization advocate that all the school systems of the State marshall data on the results of their educational program which shall be presented to the citizens in each community in as effec-

tive a manner as possible. Be it further resolved that we urge the California Teachers' Association to provide an adequate and continuous program which will interpret to the public the work of the schools of the State, through the press, radio, and in other suitable ways.

12. We believe that we have a serious responsibility to combat in ourselves, and on the part of the public, the acceptance, often unconscious, of ideas antagonistic to our democratic principles. For that reason, we protest discrimination in the selection of teachers, supervisors, or administrators on the basis of nationality, creed, sex, or marital status.

13. To Superintendent John A. Sexson, and to the members of his educational staff, we are greatly indebted for generous assistance in the management of our conference and for the many educational opportunities we have enjoyed during our stay in Pasadena.

14. The hospitality provided by the management of Hotel Vista del Arroyo has made our visit here very pleasant. We express our appreciation to the hotel, to the Pasadena Chamber of Commerce, and to all who have contributed to our comfort.

15. The exceptional leadership evidenced by Helen Heffernan through her continued service to education in California marks her as an outstanding educator. She has intelligently, unselfishly, and conscientiously devoted herself to the task of providing our organization and everyone who seeks her guidance with definite help. She has graciously assumed responsibility in initiating and furthering worth while educational practices. In this relationship, we wish to commend specifically the fine achievement represented by the Supervisors' yearbook, *Educational Practices of Promise*, prepared under Helen Heffernan's guidance. We are mindful of all she has done and all she stands ready to do. We desire to go on record as commending her leadership and expressing our appreciation of her contributions to elementary education which have given California the foremost place in the nation.

RESOLUTION ON SOCIAL STUDIES BOOK

Inasmuch as the State Board of Education will, within the next several years, adopt new materials to replace the present history and geography adoptions, be it resolved that this Association recommend to the State Board of Education that a thorough investigation into the feasibility of adopting an integrated social studies series be carried on.

The present books are unsatisfactory because teachers are attempting to organize instruction around areas of experience.

SAFETY EDUCATION MATERIALS

Materials on Safety Education are available in a series of bulletins issued by the Safety Education Projects of the Research Division of the National Education Association. These publications are a series designed to supplement the material contained in the 1940 yearbook of the American Association of School Administrators, the project having been undertaken in 1937.

The list of these materials include the following titles: *Safety Education Thru Schools,* Research Bulletin, November, 1938; *Safety and Safety Education: An Annotated Bibliography; Checklist of Safety and Safety Education; Safety Units for Primary Grades; Units in Safety Education Grades I and II; Units in Safety Education Grades III and IV; Problems and Topics*

in Safety Instruction; Safety in Pupil Instruction; Visual Aids in Safety Education.

The content of *Visual Aids in Safety Education* represents an enlargement and revision of the reviews of films and slides for safety education contained in the November, 1938, Research Bulletin. Films and slides dealing with safety education or the training of drivers which were issued prior to December 15, 1939, are included. Films are rated on the following points: suitability for school use, amount of objectionable advertising, grade levels for which the film is best suited, and the general appeal of the film. The films were tested by showing them from time to time to groups of children of all grade levels.

The bulletin, *Problems and Topics in Safety Instruction,* is an account of practices in the teaching of safety education which are being followed in present-day courses of study. They have been compiled with the intention of providing teachers and administrators who plan to undertake or to improve their safety programs with suggestions that may be adapted to local curriculums.

Three publications are planned in the series of units which have been prepared especially for teachers in the elementary grades. *Units in Safety Education Grades III and IV* is the second in this group. The foreword of this unit sets forth the difficulty that the mass of available material makes for the teacher of safety education. The teacher is too pressed for time to prepare a well-organized program of instruction out of the publications which are available. The unit has been prepared from materials which offer a swift approach to safety instruction based on local interests and needs. Each unit has been tried out in selected schools in various parts of the United States and revised on the basis of classroom experience.

These publications on Safety Education are available from the National Education Association, 1201 Sixteenth N. W., Washington, D. C. They are sold for twenty-five cents each with reductions for larger quantities.

REPORT OF CONVENTION OF TEACHERS FOR THE DEAF

The Report of the Proceedings of the Thirty-first Meeting of the Convention of American Instructors of the Deaf, held in June 1939 at the California School for the Deaf in Berkeley, has been published as Senate Document No. 165. Many aspects of the work of educating deaf children and helping in their adjustment were discussed by the members of the profession representing institutions for the education of the deaf throughout the world.

Copies of the report may be secured from the Government Printing Office, Washington, D. C.

CURRICULUM MATERIALS DEVELOPED IN CALIFORNIA PUBLIC SCHOOL SYSTEMS

A wealth of valuable curriculum materials have been developed through the efforts of teachers and curriculum directors in the city and county school systems of the state. These materials may be used either as suggestions for similar work or as the basis for adaptations of similar material to local situations. A list of radio scripts, units of work, record and report forms, pageant scripts, and an experience chart is given here. Copies of the various items described in the list which follows are available from the office of the county or city school system in which they were developed.

Unit on Homes. A committee of teachers of San Mateo County under the chairmanship of Eleanor Freeman Collins, Director of Curriculum on the staff of the county superintendent of schools, has prepared a unit of work, Homes of the World, for the use in the third and fourth grades. The unit offers opportunities for interesting experiences leading to the development of certain concepts and attitudes believed to be fundamental to the training of elementary school children. The unit includes sketches of primitive homes of the peoples of various countries of the world, suggestions for integration of the subject matter and for the use of the unit. A comprehensive bibliography is included.

Growth Reports. A series of four-page "Growth Reports" covering grades one to six have been developed by Gretchen Wulfing, Director of Elementary Education, Redlands Public Schools. The report for the first year, of colored cardboard six by eight inches in size, is called "The Story of Myself"; and the items listed, with appropriate blanks for the teacher's check marks and parent's signature, include health habits, social habits, work habits, skills and interests.

Curriculum Materials. "List of Materials in Curriculum Laboratory," prepared by M. E. Mushlitz, Director of Secondary Curriculum, and Edla L. Schreiner, Director of Elementary Curriculum, lists the materials available in the office of W. K. Cobb, Superintendent of Schools, Ventura County. The list includes periodicals, text books, professional books, music, bibliographies, visual aids, and mimeographed materials.

Nursery School Language Materials. A booklet entitled "Literature and Language Development in Young Children," suggesting criteria for story material, qualifications for a good storyteller, and describing language experiences for foreign children, methods in speech training and correction, and standards for selecting nursery school books, is now available. The publication was prepared by a committee of the Nursery School Section of the Teachers' Work Conference in Los Angeles, under the chairmanship of Edith Shafer as a part of the Works Progress Administration of the California

State Department of Education. Interesting examples of the work of nursery school children have been included in the book. The bibliography offers a list of helpful books for teachers.

Record Forms and Study Guides. A number of forms, charts, and study guides, have been developed by the teachers of Sonoma County during the past school year.

One form, a 5 by 8-inch personal history card, offers opportunity for the complete record of a pupil. The reverse side contains the pupil's transfer record to high school. A teacher's guide is attached to the card.

Another form lists sixty-nine questions developed by the co-operative efforts of the Healdsburg elementary and high school teachers for the purpose of guiding the high school freshman.

A brief unit on "Learning About High School" is the work of the teachers of the eighth grade. As the title implies it is designed to prepare children for entrance to high school.

One most interesting document in this group is a "study guide" developed by the Sonoma County English teachers of grades five to twelve. It grew out of a desire on the part of the teachers to know more concerning the results of the present program of English teaching, and to find a sound basis for meeting the problems now encountered in the program.

Social Living Chart. "Experiences for Development of Concepts of Social Living for Primary Pupils" is the title of a 34 by 22-inch chart prepared by the teachers of Colusa County under the direction of Mrs. Ruth Edmands, Rural School Supervisor.

The chart gives the concepts of social living for children in units on the home, school, community, and the farm, for beginning, second-year, and third-year pupils. In each of these fields are concentrated a variety of experiences suitable to the particular situation. These experiences include the dramatizing of many events of frequent occurrence in the lives of adults. According to the chart they build health habits with daily practice of handkerchief, posture, and ventilation; keep a sitting hen in school; make and serve a simple food; make the acquaintance of the principal, teachers, and custodian. The chart is valuable for its suggestions of vital experiences aimed to inculcate sound habits, and orient the child in his complex world.

Pageant of National Life. "American Cavalcade," a patriotic pageant written and directed by Carmen Gibson, Music Supervisor of Imperial County, is available in mimeographed form. There are ten episodes stressing the westward movement and correlating history, music, drama, folk dancing, costuming, with an excellent arrangement of sequences.

Public Schools Week Radio Script. The Monterey Public Schools, under the direction of J. R. Croad, superintendent, prepared a Public Schools

Week script for broadcasting as a part of the activities of Public Schools Week. The broadcast served to publicize the work of the schools in the fields of music, including the orchestra, health and physical education, home arts, arithmetic, spelling, glee club, industrial arts, drama, library activities of the children in the various grades, the work of the custodian, language arts, social studies, parent-teacher association, and child guidance committee. The experience was beneficial to the children who co-operated with the teachers in preparing it.

Study of Industrial Environment. The extent to which schools may draw upon their immediate surroundings to develop experiences which are fundamental to a learning situation is illustrated in a booklet "Elementary Schools in a Redwood Lumbering Section Study Their Own Environment," by Frances Giddings, former County School Supervisor, Mendocino County. The booklet describes the work of the children living in the redwood region. Many of the children of foreign background are handicapped in their use of the English language, and this theme was chosen because it is perhaps the most familiar and important part of their environment.

The children have written stories on such interesting topics as planning the layout, felling the tree, peeling and sawing into logs, hauling the logs to the cars, hauling by tractor, work at the lumber mill. The contributions of the older children on the logging operations of the region would be enlightening to many adults. The book is illustrated and contains a bibliography. Copies may be obtained from John Taylor, County Superintendent of Schools, Ukiah.

Elementary Principals' Yearbook on Guidance. The need of individual guidance for elementary school children is discussed in the Nineteenth Yearbook of the Department of Elementary School Principals of the National Education Association, *Meeting Special Needs of the Individual Child,* Volume XIX, July, 1940. While the discussion does not overlook the needs common to all children, it stresses particularly the necessity of providing for children of superior ability as well as slow learning, disinterested, and retarded children; the physically handicapped, as well as for children with cultural and economic handicaps.

Teachers' Guide in Reading. Moving ahead with the increasing trend of developing teaching materials through curriculum study groups of in-service teachers, the Alameda County Board of Education adopted on June 11, 1940, a *Teachers' Guide in Reading for Elementary Grades,* which was compiled under the direction of Mrs. Ethel S. Ward, Co-ordinator and General Supervisor, and Dr. Irving R. Melbo, Curriculum Consultant. Superintendent Edgar E. Muller, in an introduction explains the origin and purpose of the bulletin in these words: "No course of study is better than that which the teachers themselves create. This is the work of teachers: . . . It repre-

sents the changing viewpoint and improved methods in actual classroom use during the last year and a half."

This and similar work being carried on in school systems throughout the state indicate the new type of course-of-study publication which is rapidly supplanting the scissors and paste-pot creation held over from the day when neither administrators, supervisors, or teachers were professionally adapted to do the in-service preparation of teaching materials and techniques now being undertaken.

Publication on Library Organization. The staff of the Superintendent of Schools of Kern County under the direction of J. David Laird, Director of Curriculum, has prepared a seventy-eight page printed pamphlet under the title, *A Guide to Library Organization for the Public Schools of Kern County.* This pamphlet lists suggestions concerning books that are of most worth, steps in the organization of the library, principles important in the organization of library materials, steps in keeping school inventory, key to recommended book classification. The books in this pamphlet are organized around the classification: cultural arts, guidance, healthful living, language arts, mathematics, natural environment, social environment. In the first month of the school year this bulletin has proved its usefulness as judged by the inquiries from teachers concerning specific instructional material.

Manual for Porterville Teachers. A manual of information and instructions with the title "Teachers' Manual for the Porterville Elementary Schools" has been prepared under the direction of City Superintendent of Schools, Emmett R. Berry.

The manual deals with transportation, attendance, registration, programs, supplies, library, report cards, testing program, supervision, finances, faculty, and test analysis. It has been found that information on these subjects and a few specific comments on curriculum development are helpful to teachers.

"Porterville Elementary Schools Third Grade Social Science Curriculum, Term of 1940-1941," has also been developed by the elementary teachers of Porterville.

Course of Study for Music. A committee of teachers under the leadership of Carmen Gibson, Supervisor of School Music, Imperial County, has prepared "A Suggested Course of Study for Music in the Rural Schools."

The material contains selected lists of songs for each grade, a type classification, and a fine list of reference material which should be helpful to teachers in furthering the school music program.

Siskiyou County Manual. The County Board of Education of Siskiyou County adopted and issued to the elementary schools of the county July 1, 1940, a manual and course of study in loose-leaf form. Typical of the gen-

eral tone of the guide is the statement of purposes of the social studies program: "The social studies in particular occupy a unique position in the school program, since their purpose is fundamentally the central purpose as well as the justification of the whole school."

Six requisites for the ideal program of activities provide for:

1. A great number of varied and interesting and vital experiences in order to challenge all the hidden interests, abilities, and potentialities and to provide for a great number of individual differences in children.
2. Such socializing experiences as co-operation, responsibility, tolerance, respect for the rights of others, and the tools necessary to become socially competent.
3. Opportunity to develop skills.
4. Purposeful activity.
5. Experiences wide in scope and cutting across a number of basic human needs and problems.
6. Activity sufficient to stimulate the fullest mental, emotional, social, and physical growth of each child.

Merced County Government Bulletin. As a result of many requests from county schools for information concerning county government, a 68-page mimeograph bulletin has been recently prepared by the office of the County Superintendent of Schools in Merced County under the title, "Merced County, Plan and Function of Our Local Government." Over the signature of each of the thirty-four public officers (local, state, and federal), whose activities and duties are directly related to serving the people of the county is a statement from one to three pages in length on the purposes, duties, and responsibilities pertaining to each.

Citizenship Unit. "Citizenship and Democracy," a timely unit-of-work for seventh and eighth grades, has been prepared by a committee of teachers in San Mateo County and issued by the County Board of Education in September, 1940, to elementary schools of the county.

The unit is well written, includes bibliographical reference with each area of study and relates the teaching of citizenship in the democratic way of life through the introduction of studies and activities on such problems as local and state government, conservation of natural resources, safety, sanitation, recreation, police protection, housing, industry and business, and the Constitution of the United States.

The second section of the unit is devoted to (a) suggestions for integration of subjects and school experiences; (b) experiences, exhibits, and experiments; (c) suggestions for worth-while excursions; (d) songs and phonograph records; (e) visual materials; and (f) a bibliography of books, pamphlets, and leaflets for children and teacher.

CALIFORNIA ASSOCIATION FOR CHILDHOOD EDUCATION STUDY CONFERENCE AT FRESNO

California Association for Childhood Education will convene for the seventeenth annual study conference on November 22 and 23 at Fresno, with headquarters at Hotel Fresno. The theme, "Enlarging Opportunities for Teachers in Service," will focus attention on fundamental skills as well as on the creative arts in a modern social program through the medium of workshop sessions, demonstrations, lectures by outstanding speakers, exhibits, and field trips.

Dr. W. Ballentine Henley, Associate Professor of Public Administration, University of Southern California, will address the convention at the Friday morning session. Miss Alice Ross Livsey, President of the California A. C. E., will preside.

Leading educators throughout the state will head the popular workshop sessions under the direction of Helen Heffernan, Chief, Division of Elementary Education, State Department of Education.

Mrs. Malbone Graham, South Pacific Director, American Association of University Women, will address the members at the Friday evening banquet on "The Ramparts You Watch."

A symposium on Saturday morning led by Miss Heffernan, with the workshop leaders participating, will be an event of great interest at the Fresno conference.

"Public Relations and Legislation" will be the topic at the Saturday luncheon with Ida May Lovejoy and Arthur Corey as speakers.

Following the business meeting there will be offered a choice of excursions: one to the Friant Dam, which is now under construction, and one to the Firebaugh Federal Migrant Camp.

NEW BIBLIOGRAPHY ON CHILDREN'S LITERATURE

500 Books for Children, Bulletin 1939, No. 11, United States Department of the Interior, Office of Education, by Nora E. Beust, Specialist in School Libraries, is an excellent bibliography prepared to acquaint adults and children with the wide range of interesting subjects and readable styles of literature available for children.

Besides offering a comprehensive catalogue of books arranged by grades, the bulletin also lists the names of the artists who illustrate the books.

Other features of this bibliography are the list of Newbery Medal books; the full page illustrations, two of which received the Caldecott Medal, awarded annually to the most distinguished picture book for children published in the United States during the year.

Copies of *500 Books for Children* may be secured from the Superintendent of Documents, Washington, D. C., for fifteen cents each.

INEXPENSIVE BOOKS FOR SCHOOL LIBRARIES

Under the title of *One Dollar or Less, Inexpensive Books for School Libraries,* Pamphlet No. 88 of the United States Department of the Interior, Office of Education, Edith A. Lathrop, Associate Specialist in Libraries, has prepared brief descriptions of representative examples of publishers' series which contain titles suitable for elementary and junior high school libraries, with a description of the content and format, grade level, and price.

Another section of the pamphlet is devoted to a discussion of ten-cent books, which are sold through syndicated stores, and contains examples of recent lists of such books that have been prepared by librarians and teachers. The writer relates incidents showing how educators, librarians, and parent-teacher associations succeeded in influencing managers of variety stores to purchase recommended books. A list of books which sell at this price is given.

The writer offers suggestions concerning the selection of books both for content and format.

Copies of *One Dollar or Less* may be secured for five cents each from the Superintendent of Documents, Washington, D. C.

SURPLUS COMMODITIES FOR SCHOOL LUNCHES

A bulletin, *The School Lunch Program in California,* which describes the program of distribution of surplus commodities to the schools by the Bureau of Commodity Distribution has just been issued. Extracts from important sections of the bulletin are given here for the information of school administrators.

1. The School Lunch Program of the Surplus Marketing Administration of the United States Department of Agriculture is being inaugurated on a nation-wide basis.
2. Surplus commodities include wheat, prunes, oranges, corn, dried milk, apples, butter, and those products "which are produced in such abundance in certain areas that they exert a depressing effect upon wholesale and retail prices."
3. The school lunch program is available to schools making application for such service, after having been declared eligible by the county director.
4. Application should be made locally to the district supervisors of the Bureau of Commodity Distribution, or to the county director of the State Relief Administration.
5. Provisions to be met by schools receiving surplus commodities include:
   a. Operation of the school lunch program on a nonprofit basis.
   b. Children must not be segregated in any way during the serving of lunch, which would indicate a distinction between the paying and nonpaying children.

c. A proper determination of the number of pupils within the school eligible for free lunches.
d. The total of the surplus commodities allocated to the school cannot exceed the maximum amount allowed for all eligible children.
e. A decrease in goods purchased can not result from the program where, in preparing and serving the lunches, it becomes necessary to commingle the surplus commodities with additional commodities supplied by the sponsor, a charge may be made to the paying pupils for the portion of the meal served to them.

Other detailed information regarding sponsors, equipment, delivery of commodities, and so on, may be obtained from The Bureau of Commodity Distribution, 180 New Montgomery Street, San Francisco, or from the local SRA Director.

HANDBOOK FOR VOTERS

A publication intended for the use of voters has been prepared by the California League of Women Voters. *The California Voters Handbook* contains 128 pages of "definite, reliable, and unpartisan information about each unit of government, local, state, and federal, prepared for the use of all citizens who want to know what their government is and how it operates." Prepared by experts in the field of government, the material has been checked by other experts. The *Handbook* will be useful for adult education groups, civic clubs, young peoples' organizations, political clubs, social study and citizenship classes, educators, professional and business people. The nine chapters of the book have the following titles: The Voter, Election, Political Parties, Federal Government, California Government, County Government, City Government, Public Personnel and Public Finance.

Copies of the *Handbook* should be ordered from the California League of Women Voters, 447 Sutter Street, San Francisco. The price is 35 cents, plus tax and postage for single copies. Ten or more copies are sold for 32 cents each, plus tax and postage. The price is 26 cents each, plus tax and postage, for lots of fifty or more.

TENTH YEARBOOK OF COUNCIL FOR EXCEPTIONAL CHILDREN

The Tenth Year Book of the Northern California Council for Exceptional Children gives the proceedings of the group at its conference held at Hotel Oakland, Oakland, California, April 3, 1939.

This yearbook leaves no doubt in the mind of the reader that society, through its organized channels, is deeply concerned in the welfare of all children. The personality needs of the physically handicapped child, the influence of scholastic success and failure upon developing personality, per-

sonality conflicts of youth, the rise of social interests in early adolescence, personality changes in nervous and mental disorders of childhood, physiological bases of personality, preparation of teachers for the mentally deficient are discussed in this publication by leaders in the various fields represented.

A limited number of copies of the yearbook may be secured from Katherine Ingles Sutter, Secretary of the Northern California Council for Exceptional Children, 1334 Masonic Avenue, San Francisco.

CALIFORNIA-WESTERN MUSIC EDUCATORS CONFERENCE

The California-Western Music Educators conference is to be held in San Jose, California, Sunday, Monday, Tuesday, and Wednesday, April 6, 7, 8, and 9, 1941.

The California Music Educators conference is one of six sectional conferences which comprise the Music Educators National conference, the states of Arizona, California, Nevada, and Utah being the four principal states included in the jurisdiction of the California-Western conference. This conference has the endorsement of Walter F. Dexter, Superintendent of Public Instruction, and Helen Heffernan, Chief of the Division of Elementary Education, California State Department of Education.

While the plans for the meeting at San Jose are still being formulated, the general idea underlying the procedures to be developed in detail will endeavor to emphasize classroom procedures, as they are related to the rural and elementary schools, the junior and senior high schools.

The session will begin with the Palm Sunday services in the San Jose churches on April 6, followed by the Junior College Festival in the afternoon, concluding with the "San Jose Night," a program which will high light the accomplishments of the elementary school teachers, and the musical agencies already operating in the San Jose State Teachers' College.

HAVE WE AN OBJECTIVE BASIS FOR GRADE PLACEMENT OF ACTIVITY UNITS?

HENRY HARAP, *Professor of Education, George Peabody College for Teachers*

The Committee on Child Development and the Curriculum of the National Society for the Study of Education recently summarized the results of research on the appropriate stages of readiness to learn the common school subjects in isolation. It is significant to note, however, that the Committee clearly indicated that it was "entirely sympathetic with a much more integrated and organic approach in actual classroom situations." [1]

This study begins where the Committee of the National Society leaves off. It is an attempt to discover the levels of development which may serve as a guide to the grade placement of units of work in activity curricula—an attempt to express maturational levels in terms of unified life experiences.

When the curriculum is conceived as a series of lifelike experiences, its sequential arrangement raises many new questions to which very few answers have been discovered in theory, in research, or in experience. From the point of view of child growth, no maturation study has been made of children above the kindergarten level. Most such studies stop at nursery school level.

There is a record of nearly four decades of experience with activity curriculums in which, presumably, the needs and interests of children were important factors in deciding what units shall be taught on any given grade level. Therefore, it was assumed, an inductive analysis of the grade placement of units of work in the published activity curriculums might yield a few clues to an objective basis for a twelve-grade sequence of grade themes.

Three major groups of curriculums were used: a collection of 96 activity curriculums; 61 selected curriculums included in the catalogue of units of work compiled by Carey, Hanna, and Meriam; and 19 sequence charts contained in recent comprehensive curriculum programs. The total number of books or bulletins used in the tabulation was 176. Most of the sources were limited to education in the primary and intermediate grades. Above this level experience with curriculums centered around the activities of life is too limited to yield dependable conclusions. The grades represented in the curriculums studied are as follows:

Kindergarten to Grade III—143 sources
Grade IV to Grade VI—116 sources
Grade VII to Grade IX—24 sources
Grade X to Grade XII—14 sources

[1] *Child Development and the Curriculum.* Part I. The Thirty-eighth yearbook of the National Society for the Study of Education. Prepared by the Society's Committee on Maturity, Carleton Washburne, Chairman. Edited by Guy Montrose Whipple. Bloomington, Ill.: Public School Publishing Co., 1939, p. 53.

Grade Placements of Units in 96 Activity Curriculums

The first major phase of the analysis was directed to a study of the units included in 96 activity curriculums. Each unit title was written on a separate slip, yielding a total of 1181 entries. After combining duplicates, the tabulation included 473 unit titles classified by major topics and by grades. If the units in activity curriculums are really based upon the interests of children, it should be possible to get some help in discovering levels of child development. An analysis of the tabulation of the unit titles revealed the following grade interests.

Grade I. In the first grade there is a particularly plentiful collection of units in which children's interests in the strict sense are well represented. Although the interests are centered around the home and neighborhood, several separate strands are discernible, including the home, the community and community helpers, playing store, and animals and pets. Farm life, which is a common unit title, is simply a rural variant of home and community. The grocery store and post office, which occur frequently, are aspects of neighborhood life. Other special interests are dolls and the circus.

Grade II. The major theme which emerges on the second-grade level is the community. This accounts for the frequent occurrence of such phases as the post office (which as a unit title is even more common than the community itself), food, milk, grocery store, clothing, and the public library. The frequency of units on food, clothing, and shelter also suggests the presence of an interest in the basic human needs on this grade level. The farm again appears as a common unit. Such frequent units as primitive life and Indian life suggest a third possible emphasis upon the primitive. Other special interests in this grade are holidays, gardens, transportation, and Holland.

Grade III. Indian life again appears as the most common unit on this level; although it is closely pressed by transportation and Holland. Three centers of interest emerge: transportation, primitive civilizations, and a picturesque remote people. It should be noticed that the far away and long ago appear in the third grade as major themes for the first time. Other special interests in this grade are Japan, clothing, the community, and the home.

Grade IV. Transportation and the early industries appear as the two major motifs in this grade. Other special interests are cotton, food, animals, and Africa.

Grade V. Transportation, again, is the major theme. Special interests include health, pioneer life, Mexico, and colonial life.

Grade VI. In this grade the world seems to be the center of interest which is most common. This includes units on such countries as the British

Isles, Switzerland, Scandinavian countries, Greece, and Japan. Other special interests are communication, food, and the Middle Ages.

The tabulation seems to show a single predominating interest in grades II, V, and VI. This conclusion, however, must be discounted since three of these major themes are also found to a significant degree in other grades. Also, the data for Grades V and VI are not as extensive as in the earlier grades. The unit titles which occur on nearly all grade levels are: home, health, parties, clothing, food, community, safety, birds, farm, trees, transportation, Holland, and Japan.

An arbitrary and consistent sequence of interest levels which, for practical purposes, emerges from the foregoing reducing process is as follows:

Grade I: Home and Neighborhood
Grade II: The Community
Grade III: Familiar Primitive Peoples
Grade IV: Basic Needs of Living
Grade V: Transportation
Grade VI: The World Beyond the Immediate Community

Thus far the search for a pattern of levels of growth has yielded a few clues to the interests of children in the early grades and a somewhat arbitrary selection of grade themes in the later elementary grades derived from earlier influences of such subjects as science, geography, and industrial studies; and also of the more recent influences of activity curricula. As yet, this study has yielded no objective basis for stages of child growth.

Grade Placement of Units in the Carey-Hanna-Meriam Catalogue of Units of Work [1]

Now comes the second major phase of the analysis. From the catalogue of units of work prepared by Carey, Hanna, and Meriam [2] in 1932, 61 sources which did not duplicate the activity curriculums already considered were selected. All sources that could not reasonably be classified as activity curriculums have been excluded. The unit titles were tabulated by grades, and the whole was cast into a form convenient for analysis. A total of 986 unit titles were included in all of our sources. After identical and similar titles were combined, the table was reduced to 375 different units. On the basis of frequency of unit titles, the following grade interests were represented.

Grade I. The home and community life is the preponderant grade theme. This is supplemented by several special interests, like trains.

[1] Mrs. Sidney Crawford Bland tabulated the units of work in this section. She also made the tabulation for the last 19 sources in the preceding section.

[2] Alice E. Carey, Paul R. Hanna, and J. L. Meriam, *Catalog: Units of Work, Activities, Projects, etc., to 1932*, New York: Bureau of Publications, Teachers College, Columbia University, 1932.

Grade II. The community is the major theme in this grade, but there also appear such special interests as the circus, animals, and trains.

Grade III. There is no outstanding theme in this grade. Pioneer life, represented by a study of Eskimos and Indians, and far away places, represented by a study of Japan and Holland, are most common. The special interests in this grade include plants, animals, and boats.

Grade IV. In this grade four major themes appear: industries, colonial life, ancient civilization, and remote countries. In addition, there are such special interests as puppet show, animals, and plants.

Grade V. In this grade three major themes may be isolated, namely, the more primitive industries, such as farming and fishing; colonial life; and the westward movement.

Grade VI. In this grade there are four major channels of interest: the more recent industries, like manufacturing; invention and discovery; communication and transportation; and United States history.

Beginning with the third grade, no clear-cut stages of development appear. In each grade several themes are suggested. Some of these grew out of past arbitrary sequences in geography and history. Several themes, like homes, plants, animals, transportation, probably grew out of the more recent influences of the activity curriculums. It is rather interesting to note that after Grade IV certain special interests which are not related to grade themes disappear.

A somewhat consistent arbitrary selection from the tabulation of the unit titles in the Carey-Hanna-Meriam list would yield the following composite sequence of grade interests:

Grade I: Home and Neighborhood Life
Grade II: Community Life
Grade III: Pioneer Life
Grade IV: The Development of Our Country
Grade V: The Primitive Industries, like Farming and Fishing
Grade VI: The More Advanced Industries (growing out of invention and discovery), like manufacturing and modern transportation and communication

At this stage in the inquiry, we have certainly not arrived at a pattern of sequence objectively determined and, what is more certain, we have not yet discovered objectively what the successive levels of interests of children are.

Grade Placement of Themes in Sequence Charts

Let us turn now to a deductive phase of the analysis. In recent years many school systems have designed a curricular framework which includes

a sequence of themes, supposedly, representing the successive stages of child development. These are not based on published research; nor is there any other evidence of the objective basis of the many suggested learning sequences based upon the development of the child. It appears that in the lower grades the basis of grade themes is geographic. Indeed, nearness in space is the basis of nearly half of the themes on all grade levels. There was complete agreement that the work of the first two grades should center around the immediate environment, including the home, school, and neighborhood. Life in the Extended Community falls in the third grade in four of the sequence charts. The most common theme for Grades IV to VI is Living by Adjusting to an Expanding and More Complex Environment. This includes not only the more remote in space, but also the more complicated human activities, growing out of twentieth-century technological and social processes. This theme showed greatest overlapping, since it appeared in every grade from III to VII, although it was most common in Grades IV and V.

The Influence of Invention and Discovery appears four times in Grade V and once in Grade VI. Personal Adjustment to Social and Physical Environment appears four times in Grade VIII, although it also appears in Grades V, VI, and IX. No themes occur more than once in any of the senior high school grades, except Social Problems, which is found in Grade XI.

In an effort to secure a clear-cut contribution to the solution of the problem, a composite of the several proposals discussed thus far is here suggested:

Grades I and II: The Immediate Environment

Grades III and IV: The Expanding Environment

Grades V and VI: Invention and Discovery

Grades VII and VIII: Adjustment to Physical and Biological Environment

Grades IX and X: Adjustment to Social and Economic Institutions

Grades XI and XII: Building a Democratic Society

A Synthesis of Three Sequence Patterns

Thus far three separate sequence patterns taken from three comprehensive lists of curricula organized around the activities of life have been developed. Combining the results from the three major sources, several dominant themes are suggested for each grade level as follows:

Grade I: Home and Neighborhood Life

Grade II: Community Life

Grade III: Primitive and Pioneer Life

Grade IV: Earlier and Simpler Industries (fishing, farming, lumbering)

Grade V: Modern Manufacuring and Transportation

Grade VI: World Beyond Immediate Environment

Grade VII and VIII: Adjustment to Physical and Biological Environment

Grades IX and X: Adjustment to Social and Economic Institutions

Grades XI and XII: Building a Democratic Society

The above pattern of sequence is certainly not objectively arrived at. Beyond the primary grades it can hardly be said to represent levels of child development. There is an internal inconsistency or lack of continuity in the successive stages. Beyond the sixth grade practically no guide to the progressive levels of interests or needs has been found. Out of the increasing experimental programs on the secondary level based upon the interests and needs of adolescents, some guides to sequence should evolve in the years ahead.

Any attempt to make a tentative and convenient selection of grade centers of interest should be consistent; it should represent the genuine successive interest levels of children; and it should be within the limits of the understanding and experiences of children. On the basis of these criteria, I have arrived at a somewhat different sequence of grade centers of interest for the first six grades:

Grade I: Home and Neighborhood Life

Grade II: Community Life

Grade III: Basic Human Needs

Grade IV: Early Simple Industries

Grade V: Transportation and Communication

Grade VI: The Use of Modern Inventions in Home and Community

I have not overlooked the possibility that uniform developmental levels do not exist; that the key to learning sequence is entrusted to every individual group of learners who, guided by the teacher, are in the best position to decide what enterprises they should undertake on their particular grade level. In making this decision, pupils and teachers take in consideration the history of the group's learning experiences, significant environmental conditions, and current group needs.

Such a procedure is a practical possibility even at the present time for schools of long experience with activity curriculums. For beginning schools a suggested sequence of grade themes, even if arbitrary, is most desirable. For schools that are moderately advanced in their program of lifelike learning,

the suggested grade themes might even be extended to include a two- or three-grade interval with a certain amount of freedom of choice. For schools farthest advanced with a curriculum of active experiences, freedom of choice within the most loose and flexible sequence is all that is necessary.

Because no reference has been made to the factor of difficulty, the reader may detect a shocking omission. There is no question that difficulty does operate in determining the grade placement of learning units. For example, a unit on water supply is not found below the fourth grade, presumably, because it is too technical for little children. Difficulty, however, operates only in a rough and general way in determining grade themes for activity curriculums. There is no indication from the data that difficulty of units of work can be calibrated even on so rough a scale as that of grade levels.

If a developmental pattern of levels of learning exists, studies of genuine interests of pupils should yield some clues provided they are conducted in an atmosphere in which the order of learning is unaffected by organized knowledge. I doubt whether any procedure short of continued experimentation in actual free learning situations in many widely separated localities over long periods will yield a satisfactory basis for determining the sequence of a curriculum for living.

THE PREPARATION OF TEACHERS FOR SERVICE IN THE ELEMENTARY SCHOOL[1]

HELEN HEFFERNAN, *Chief, Division of Elementary Education, California State Department of Education*

The purpose in presenting the proposed program for the elementary credential is to secure as widespread and as democratic consideration of the problem as is possible. The present form incorporates the co-operative thinking of hundreds of school people representing various points of view: classroom teachers, supervisors, administrators, college teachers of education. Various approaches to the problem of stating credential requirements have been tested. One effort was made to state the program in terms of a functional analysis of the work of the elementary teacher. This procedure was abandoned because it became too unwieldly to use in establishing a state program or in evaluating credentials from hundreds of out-of-state institutions.

Several studies were carried on in an attempt to pool opinion on the question of needs of elementary teachers in the specific fields of science, music, and graphic and industrial arts.[2] Similar analyses in other areas should prove valuable as a basis for reorganizing the specific content of courses.

There are two aspects of the education of teachers for which the program leading to the elementary credential must make provision. First, consideration must be given to the program of general education and its relation to the prospective teacher's professional education; secondly, the content of professional subject matter must be considered in the light of contemporary educational purposes.

GENERAL EDUCATION OF TEACHERS

The general education of teachers must contribute to the development of those fundamental human qualities expressive of the democratic ideal and must emphasize the common cultural heritage. Implicit in the entire educational program is the belief that the cultivation of these qualities and the acquisition of the cultural heritage are susceptible of deliberate educational development. This belief must therefore be equally applicable to the general education of teachers.

[1] This paper was given at a section meeting of the Annual Conference of California City, County, and District Superintendents of Schools, Monday, October 7, 1940.

[2] Helen Heffernan, "Science in the Professional Education of Teachers for the Elementary Schools," *California Journal of Elementary Education*, VI (November, 1937), 100-104.
Helen Heffernan and Gretchen Wulfing, "Music Training Essential for the General Elementary Teacher," *Educational Method*, XIX (February, 1940), 288-291.
Helen Heffernan and Gretchen Wulfing, "Graphic and Industrial Arts Essential in the Preparation of the General Elementary Teacher," *Educational Method*, XIX (January, 1940), 236-241.

It is our contention that the needs of the teacher as a professional worker must give the essential character to his general education. In California, the entire four years of college training should be directed toward the prospective teacher's ultimate professional goal. At present the tendency to superimpose a two-year professional preparation on a two-year program of so-called general education has produced disastrous results. Because the general education program has been organized in narrow compartments and because inadequate guidance of prospective teachers has been given, transcripts of lower division work frequently show that major emphasis has been on subjects not taught in the elementary school and conversely inadequate basic preparation has been secured in those fields which constitute the major curriculum of the elementary school. In justice to the four-year colleges it should be stated that this condition is frequently noted in transcripts of students who have transferred from junior colleges.

It is sometimes stated that the student has not made up his mind about entering the teaching profession until he finishes junior college and therefore his general education may be largely in foreign language, mathematics, economics, and other courses not taught in the elementary school. Inasmuch as the law of California requires four years of preparation for the elementary school teaching credential, the total preparatory program must be considered in establishing the credential requirements. As in other professions, the student who cannot make a decision concerning his profession prior to college entrance must be required to complete the requisite basic general and professional preparation no matter how many college credits he has accumulated.

Various bases have been suggested for determining the general education needs of teachers. Limitation of space permits only the briefest review of these approaches. First, it has been suggested that an analysis be made of the major functions of social life. Four main categories may encompass all of the major functions, namely, health, work, civic responsibilities, and recreation. A second approach would utilize an analysis of contemporary society from the point of view of its major problems. These would include the political problems of today, the economic problems, the societal problems, and the intellectual-spiritual problems. Still a third suggested approach would be found in the whole range of processes in the present culture. This type of analysis would include work, contrasting cultures, communication, thinking, human growth, family life, play, art, consumption, community relations and processes.[1]

In the proposed program leading to the elementary credential, no violence will be done any of these bases for determining the student's general education needs. Any institution engaged in the education of teachers should make a thoroughgoing analysis of the needs of teachers by means of a tech-

[1] Based on categories in *Teachers for Democracy*, The Fourth Yearbook of the John Dewey Society. New York: D. Appleton-Century Company, Inc., 1940.

nique consistent with the philosophy represented by the institution. On the basis of such analysis, it should be comparatively simple to organize a desirable program. Increasingly, there is evidence of a trend to synchronize the general education more closely with the teacher's professional education. The proposed program leading to the elementary credential is designed to direct the general education into those areas likely to prove most useful in terms of the needs of teachers, namely, social studies, science, English, health and physical education, music, and art. It must be conceded, however, that the allocation of a given number of semester hours to a field will not guarantee adequately prepared teachers unless institutions for teacher education accept seriously their responsibility for analyzing teachers' needs in the situations in which they are likely to serve and unless the learning experiences are in themselves vital, interesting, and provocative of the student's finest effort.

Professional Education of Teachers

The first requirement proposed in the professional preparation in the field of education, namely, the evolution of educational thought and practice as to the function of the school in a democratic society, is particularly timely. Teachers must be helped to see the school as the institution designed by the state for achieving a desirable democratic society. Teachers must know the meaning of democracy, the forces and individuals in our society opposed to the democratic way of life and the techniques of social action. It is implicit in the institution of free public education, that teachers will exercise the leadership of creative intelligence and moral courage, based on a thorough knowledge of the goals of democracy to bring about the complete realization of democratic principles and ideals through the processes of education.

There is general acceptance that the professional education program must help teachers to know children. Learning is individualistic; hence the teacher must know each child if he is to guide him effectively. As the teacher comes, through study and guided observation, to an appreciation of the infinite variation in human beings, he will be less likely to attempt to drive children down standardized roads of learning. The acquisition of such knowledge is the purpose of the proposed requirements of general psychology and of the specific study of the nature of individual growth and development; the psychological aspects of learning; mental hygiene and personality development, and guidance practices.

Given a thorough understanding of the function of the school in a democratic society, given a sound basis for study and understanding of the nature and needs of children, the professional preparation must next provide for competency in the selection and arrangement of learning experiences, instructional materials, and learning methods related to all the statutory school subjects. This preparation should specifically prepare the student to relate these subjects in vital learning situations meaningful to children. It seems highly

desirable that work in curriculum and methods be related as closely as possible to the student's directed teaching assignment.

The fourth aspect of the professional preparation is the directed teaching. At the present time practice varies greatly from institution to institution in the amount of directed teaching required in terms of hours, the quantity of supervision, and the standard of performance as a classroom teacher which must be demonstrated. These problems are not within the possibility of solution in the program for the elementary credential but more specific definition of requirements may serve as a criterion in the evaluation of present practice.

Proposed Program Leading to the Elementary Credential

Each institution approved for offering work leading to the recommendation for the elementary credential shall be legally authorized to grant a bachelor's degree based upon study of the broader aspects of human culture.

The program of study for a candidate for the elementary credential shall culminate in a bachelor's degree and shall include a well-rounded program of study covering the major fields of learning. The program shall be designed to help the candidate develop into a broadly cultured person and to equip him with the professional preparation necessary for a teacher of elementary school children.

The educational program for each candidate shall be determined on the basis of his previous preparation. In the period of professional preparation the candidate will be guided by the institution for teacher education into those learning experiences designed to meet his cultural and professional needs.

The program of education shall include the following minimum requirements:

1. *Social Studies.* Twelve semester units, or the equivalent, with emphasis upon current economic, political and social problems and world geography. The legal requirement in United States Constitution shall be included in the social studies program.
2. *Science.* Twelve semester units, or the equivalent, in the fields of physical and biological science; with emphasis upon the study and use of the present environment.
3. *English, including Speech.* Twelve semester units, or the equivalent, including oral and written expression, world literature, children's literature, and the use of books and libraries.
4. *Health, Hygiene, and Physical Education.* Eight semester units, or the equivalent, including physical education activities, personal hygiene, subject matter and techniques essential in the teaching of health and physical education to elementary school pupils.

5. *Music.* Eight semester units, or the equivalent, including content and techniques essential to the teaching of music to elementary school pupils.
6. *Art.* Eight semester units, or the equivalent, including content and techniques essential to the teaching of fine and industrial arts to elementary school pupils.
7. *Psychology.* Three semester units, or the equivalent, in the field of general psychology.
8. *Education.* Twenty-four semester units, or the equivalent, of professional work in education, constituting an organized program designed to prepare candidates in the following areas:
   a. The evolution of educational thought and practice as to the function of the school in a democratic society, with special emphasis on the elementary school.
   b. The nature of individual growth and development; the psychological aspects of learning, with emphasis on directed observation of children and child study; mental hygiene and personality development; guidance practices.
   c. The selection and arrangement of learning experiences, instructional materials, and learning methods related to all statutory requirements for teaching including reading, writing, spelling, language study, arithmetic, geography, history of the United States and of California, civics including the Constitution of the United States, music, art, training for healthful living, morals and manners.
   d. Directed teaching, 8 semester units (approximately five hours of teaching for three units of credit) under the supervision of superior teachers in actual classroom situations on the elementary school level. No applicant for the elementary credential shall be recommended by the institution who has not demonstrated his or her teaching ability under the supervision of the recommending institution.
9. *Fields of Concentration.* A concentration of 12 semester units, or the equivalent, in each of two fields of subject matter appropriate for the elementary school. The selection to be made from the fields of art, industrial arts, music, psychology, science, social studies, homemaking, physical education, English, speech. Each of these fields of concentration must include at least 6 units of upper division work.
10. *Adjustment to Candidate's Needs.* The remaining units necessary to complete the requirements for the bachelor's degree and the elementary credential shall be distributed among those offerings of the institution that, in the opinion of the faculty and the candidate, best serve the cultural and professional needs of the candidate.

Conclusion

It will be noted that the proposed program provides a total of 87 required semester units. It is possible to fulfil the requirement concerning two fields of concentration within the required 87 units. The requirement for the bachelor's degree varies in institutions from 120 to 124 semester units. In the preparation of an individual student the 33 to 37 semester units, which represent the difference between the degree requirement and the specific credential requirement, afford considerable opportunity for courses of the student's choice, or for courses which the faculty believes necessary to satisfy the student's professional or cultural needs. The basic point of view in this suggested program is that the institution shall accept full responsibility for guiding each candidate into learning experiences which in the opinion of the guidance official most effectively meet the candidate's needs. In some instances because of previous preparation, a candidate who seems well-qualified may be excused by the guidance official from certain specific requirements.

Some problems relative to the basic credentials for teaching service in the elementary school still remain unsolved. One of these concerns the status of the present kindergarten-primary credential. Should the training of a teacher for service in the early childhood period be sufficiently differentiated from the training for general elementary school service to justify a separate credential? If so, should it be possible for the candidate to complete the training for both credentials within the four-year period? The State Department of Education will welcome suggestions from interested school persons on these or other problems relative to requirements for credentials covering elementary school service.

EFFECTIVENESS OF A READING READINESS PROGRAM AS SHOWN BY RESULTS OF STANDARDIZED TESTS [1]

ONA E. RING, *General Supervisor of Schools, Contra Costa County*

The importance of reading readiness has been accepted by teachers and students of teaching methods for a number of years. It is well known, however, that there are many schools and teachers who do not prepare young children for a reading program before they begin to read.

In order to be ready for learning in any field a person must have ability to profit from learning experiences in that field. The concept of readiness may apply to reading, writing, spelling, or numbers in the primary grades. It may apply as well to any field of learning in the upper grades, high school, or college. It seems safe to say that no individual can learn any subject until he reaches the point where there is definite readiness for that particular subject he is to learn. Time is wasted and harm is done to the individual if attempts are made to teach it before that time.

BACKGROUND OF EXPERIMENT

In the Antioch Primary School of Contra Costa County the principal, teachers, and a member of the staff of the County Superintendent of Schools met four years ago toward the end of the school year to discuss the idea of reading readiness. All of them were fully aware of its importance. They all knew from experience that many children fail to learn to read in the first grade. Because of this initial experience with failure in connection with school work the children are conditioned against reading. Thus the feeling becomes firmly established that this task given them is something which they cannot do. These children give up trying and remain indifferent to or acquire an active distaste for the whole reading process. Some of the teachers felt that in some cases this distaste colors the child's entire outlook on life.

Also it was believed by the teachers that some young children who are able to succeed in learning to read when they start to school do so at the expense of their eyes and nervous systems. E. A. Betts states that in a survey he made of 194 first-grade entrants, 25 per cent had difficulty in discriminating between common word forms; 38 per cent were unquestionably farsighted; 14 per cent lacked normal fusion; 38 per cent did not have the degree of eye co-ordination and the fusional desire that comes from experience with two-eyed vision to pass an easy test of depth perception; and 10 per cent

[1] This study was made in a seminar directed by Cyrus D. Mead, Associate Professor of Education, University of California.

showed eye muscle imbalance. He believes that requiring some children to read typical first-grade materials at six years of age establishes undesirable mechanical reading habits.[1] It is believed, however, that the most disastrous result that comes from attempting to force close attention to print before the child is physiologically ready for it is the injury to the entire nervous system.

In studying the field of the development of reading readiness the teachers became familiar with the research studies which show the relationship between mental age and ability to read. Morphett and Washburne reached the conclusion that a child must have a mental age of six to achieve any progress in reading, and a mental age of six and one-half to more nearly insure success in reading.[2] As most of the children enter school before having reached such mental ages, it was felt that delay in reading would greatly benefit them.

There were children in the school who spoke little or no English before entering school. There were others whose experiences were so meager that many of the concepts and terms used in the first reading books were unfamiliar. To all the children the school was a new experience and there were many things they needed to know before they were ready to learn reading.

There had been some attempt to develop reading readiness among the beginning readers; but because it was felt that the parents judged the school and the efficiency of the individual teacher by the rapidity with which the children learned to read, this program had not been given so much time as the teachers believed was necessary. There were five first-grade classes in the school in which the pupils were grouped heterogeneously. It seemed advisable that all the teachers of beginning children in the school should carry on the same type of program to avoid criticism from the parents. If all of them were undertaking like procedures for developing reading readiness, parents could be more easily lead to understand the reasons for such a program. Though there had been for several years a preprimary class in the school for the most immature children, this did not solve the problem of many other children. The principal and teachers at Antioch decided after due discussion that beginning in the fall of 1937 a program for developing reading readiness would be carried on for all the children during the entire first-half of the school year, the regular instruction in reading to begin at the second-half of the school year.

Types of Instruction

Previous to September, 1937, the Antioch Primary School had carried on the traditional type of reading program described in the teacher's manual

[1] E. A. Betts, *The Prevention and Correction of Reading Difficulties.* New York: Row Peterson Co., 1936, pp. 67-68.

[2] Mabel V. Morphett and Carleton W. Washburne, "When School Children Begin to Read," *Elementary School Journal,* XXXI (March, 1931), 496-503.

of most of the series of reading textbooks. There were usually three or four weeks devoted to a preparation for reading. There were units of activity being carried on in most of the rooms during the year. At least 60 per cent of the school day in all the first-grade rooms was devoted to the reading program. This program consisted of consistent work with stories, sentences, phrases, and words. At first a large chart was used. The same work was also printed on the blackboard. Every effort was made by the teacher to focus the child's attention on the material used for as long a time as was possible in order to teach him to read. Flash cards were often used with the same words and phrases that had been given on the chart. Usually preprimers were given to the children during the second month of instruction. These books contained much of the same material that was used on the charts but the print was much smaller. Other preprimers were used when these were finished, and usually before the second semester was started primers were put into the hands of some of the children. Some groups finished several of these and were given first readers before the end of the school year while some were kept in preprimers or primers. Many of these had to be started again on the same work at the beginning of the second year and some of them again in the third year.

Program for Developing Reading Readiness

In September, 1937, the program for developing reading readiness went into effect. This program was concerned with three factors: the child's physical, personal, and intellectual development. The physical factors on which reading readiness depends—speech, hearing, vision, and general health—were given attention before or as soon as the child entered school. A physical examination was given in May to all children who would be of school age in September. This gave the parents the opportunity of having corrected during the summer any physical defect that needed attention. Help with speech defects was given at school by the classroom teacher and by special speech teachers.

All of the children needed help in personal or emotional development. Adjustment to social situations is an important part of this development. This was accomplished through actual experience in school which gave them practice in such adjustment. By means of the activity program which was being carried on, many experiences were given all the children to help them gain emotional stability, to give them a feeling of belonging to the group, and to help them in getting along with each other.

In working toward the intellectual development of the children the teachers of this school began with the statement of Paul McKee that there are seven major fields of instruction in the period of preparation for reading with which they should be concerned. In enumerating the fields, McKee

followed the list given by the National Committee on Reading.[1] The seven fields are:

1. Providing children with real, varied, and rich experiences essential to getting of meaning from material to be read
2. Training in the use of ideas
3. Training in the speaking of simple English sentences
4. The development of a wide speaking vocabulary
5. Training in accurate enunciation and pronunciation
6. The development of a desire to read
7. Training in keeping a series of ideas in mind in their proper sequence[2]

The teachers helped children along the first of these fields by excursions to nearby places such as the neighborhood store, the dairy, a walk through the park, with discussion and solving of problems encountered and subsequent activities connected with the excursion. Birthday celebrations, entertaining parents, dramatic activities, and rhythm bands helped in gaining new experiences and therefore new concepts. Construction activities such as making boats, wagons, houses, airplanes, and the like; practical experiences such as caring for plants and pets in the schoolroom, planting a garden, playing games of different kinds—all these contributed toward enrichment of the child's experiences which helped him in getting meaning from material read later on.

In the second of the major fields of instruction in reading readiness—training in the ability to do problematic thinking—teachers helped children through construction activities, suggesting the need for problematic thinking in the composition of a picture, discussing during the planning period the best procedure to follow in the classroom, planning improvements and decorations for the room and school, growing plants, learning how to make butter from cream.

The next three fields of instruction for the period of preparation for reading—training in the speaking of simple English sentences, the development of a wide speaking vocabulary, and training in accurate enunciation and pronunciation—were developed through free conversation, relating experiences, composing group letters and stories, telling and dramatizing stories, learning poems and songs, conversation on the toy telephone, encouraging children to use new words that would fit naturally into discussions, and through presenting good models of enunciation and pronunciation.

The development of a desire to read was fostered by having in the room attractive books for the children to examine, reading stories to the children from books, making picture books, labeling objects in the room, printing and

[1] *Report of the National Committee on Reading.* The Twenty-fourth Yearbook of the National Society for the Study of Education. Edited by Guy Montrose Whipple. Bloomington, Ill.: Public School Publishing Co., 1925, p. 27.

[2] Paul McKee, *Reading and Literature in the Elementary School.* Boston: Houghton Mifflin Co., 1934, pp. 99-100.

putting up in the room various signs and bulletins, making charts of experiences the children have had and reading them, inviting children from other grades to come in to read to the children.

The last of the major fields of instruction is training in the keeping in mind of a series of ideas in their proper sequence. This was done by asking children to name in order the events of a familiar story or one they had recently heard. Experiences that had happened to the child were named in the order of happening. The steps in the performance of some familiar activity were named. Carrying out a series of requests in their proper sequence helped in this field. These areas were all overlapping and activities helping in one field were also of value in most of the other fields. Lucile Harrison's book *Reading Readiness* suggests many activities for the use of the teachers.[1]

Results of Reading Tests

Three successive first-grade classes since 1937 have had this training in developing reading readiness during their first half-year in the beginning classes. The group with which such a program started is now starting in the fourth grade. The teachers feel that the children have gained much from the work carried on. Both teachers and pupils have been relieved of the strain which resulted from attempting to achieve the impossible. The question now arises: Has this program helped the children in reading ability? The answer to this question lies in a comparison of the reading abilities, as measured by standardized reading tests, of the children of these groups with those of previous groups which had no such program for developing reading readiness and with those from other schools which do not carry on such a program.

On May 5, 1938, the Gates Primary Reading Test was given to the 118 children in the second grade. These children had started school in September, 1936, and had had instruction of the traditional type in reading for almost two school years, a total of about eighteen months. Their average reading grade according to the test was 2.6. The range in grade scores was from 1.3 to 3.5.

On May 4, 1939, the same test was given to the second-grade children of that year. There were 143 children tested. The average reading grade for the group was 2.5. These children had received only thirteen months of reading instruction, but their average reading achievement was only one-tenth of a year, or one month, less than that of the children with eighteen months of reading instruction. The range in scores was the same.

As a check on the comparability of the two groups, the California Test of Mental Maturity was given to both groups of children in January, 1939. The average IQ of the regular reading group was exactly 100, and the range was from 66 to 147; the average IQ of the reading readiness group was 104, and the range, 71 to 136.

[1] M. Lucile Harrison, *Reading Readiness*. Boston: Houghton Mifflin Co., 1936.

The study was continued during the latter half of the school year 1939-40, with a comparison of the same reading readiness group with a group of comparable size and intelligence in the same grade of another school which had not had a general program for developing reading readiness.

The Stanford Achievement Test in Reading was given on March 13, 1940, to both groups. The average reading grade of the group of 152 pupils without a reading readiness program was 3.2. This group had received 26 months of reading instruction. Their average IQ was 103. The reading readiness group made an average reading grade score of 3.3. These children had received only 21 months of actual instruction in reading although they had been in school for the same length of time as those of the other group. The range in reading grade scores of both groups was practically the same—from 2.0 to 6.5. The average chronological age was the same—8 years, 8 months.

Judging from the results obtained in the tests given to the regular reading group and to the reading readiness group, both of which were in the third year of school, the reading readiness group made as much progress in reading in 21 months as the control group made in 26 months.

The following tabulation presents in summary form the comparative data on the reading readiness group and the two groups which received the traditional instruction in reading:

	Reading readiness group	*Traditional instruction group*
Comparison of reading readiness group, Antioch School, with traditional instruction group at Antioch School		
No. of pupils	143	118
Average IQ	104	100
No. of months of reading instruction	13	18
Average reading grade score	2.5	2.6
Comparison of reading readiness group, Antioch School, with traditional instruction group at other school		
No. of pupils	143	152
Average IQ	104	103
No. of months of reading instruction	21	26
Average reading grade score	3.3	3.2

Conclusion

The comparisons made of the reading readiness group with two other groups of comparable numbers, mental age, and chronological age, show that a program for developing reading readiness results in a faster rate of progress in reading. According to the judgment of the teachers in the school carrying on the program for developing reading readiness, the children are also better off physically and emotionally than the children who started on a reading program immediately without regard for the readiness for it.

ARITHMETIC IN THE ELEMENTARY SCHOOL CURRICULUM

BERNICE BAXTER, *Co-ordinator of Instruction, Oakland*

In a program of elementary education which attempts to make children intelligently aware of their surroundings and to afford them opportunities for contacting the realities of life, arithmetic should assume a prominent place. The environment in which children of today live is essentially one in which number, time, space, size, and quantity relationships play an important part. In order to participate understandingly in the life about them, children need to acquire an increasing ability to apply number and to react mentally to the concrete quantities with which they come in direct contact. As they mature, children should have sufficient experience with concrete examples of number relations to interpret quantitative comparisons and illustrations which occur in all types of current reading and text materials. If the elementary school considers its function to be the orientation of children to their surroundings, the need for an intelligent reaction to the quantitative aspect of life cannot be overlooked.

It has taken centuries of experience and subsequent contemplation for human thought to evolve a comprehensive number system. Our present Arabic number scheme represents man's ingenuity in encompassing into an orderly sequence his cumulative years of experiences with numerical relationships. Thus the number system is as intricate as man's capacity for logical thinking. Too often schools, elementary and higher schools, embody in their curriculums segments of this number system and attempt to teach, through a process of memorization, first one fragment of the number system, then another, another, and so on, until they have presented to pupils the allotted dosage. Such teaching tends to overlook the fact that man learned to think in a comprehensive way only after he had formed some ideas of his own. While no one would advocate that children be taught by the same laborious method as that by which man through the ages built up those number concepts which have been combined into a number system, thoughtful educators are realizing now that the arithmetic teaching of the last fifty years has probably been too much foreshortened and telescoped to have much basis in experience for children. While there is agreement regarding the necessity for knowing the number system, there is a growing tendency today to have children enjoy the same motivation to thought that earlier generations had when they tried to find the recurring answers to re-experienced combinations of quantities or amounts.

Concepts, principles, and skills in arithmetic can become the child's working equipment only if those concepts, principles, and skills are given impetus and opportunity to develop by means of an associational mental process. In other words, there must be opportunity, according to individual need, for a first experience with tangible evidence followed by an experience with symbols standing for the original experience before the symbols alone can be expected to incite thinking. Symbols which have no counterpart in the learner's experience are dead for the learner so far as being a stimulus to mental activity.

Economy of teaching and of learning results if children are permitted to make discoveries for themselves. Seemingly it has been difficult to let this theory function in arithmetic teaching. Because of the precise and exact nature of the content of arithmetic and because arithmetic relationships are grasped relatively slowly by some children, there has been, and still is, a tendency to feel hurried and overcome by the intricacies of the number system. As a result, insufficient time has been allowed for pupils to grow into an understanding of the processes of arithmetic. There has been such crowding of arithmetic content into the elementary grades that teachers have often been obliged to present processes when they knew that children were not ready to use these processes understandingly. A great waste of time and energy has characterized such teaching efforts. Discouragement and a dislike for arithmetic have been created in pupils.

Some of the unsatisfactory conditions under which arithmetic is taught might be removed if agreement could be reached on a few of the crucial issues underlying the philosophy, method, and organization of arithmetic teaching. The following seven questions state the most crucial issues. Each question is worth more extended discussion than will be presented here. The questions are these:

Shall the content and plan for teaching arithmetic be organized into a definite course of study with a specified sequence of learnings to be sought?

Shall arithmetic teaching be confined to a particular time of day or shall it be threaded through the entire day, incidentally, as needed by children in solving problems which may arise?

Are there mathematical values other than those resulting from a direct study of numbers that should be given a place in the elementary school? What are they?

By what criteria can grade placement of topics in arithmetic be determined? Should grade placement of topics be attempted?

What should be the function of the teacher—to develop methods of discovery and learning which the pupils may use to determine results for themselves or to demonstrate the procedures which the pupils then learn and use?

What is the function and what is the place of practice?

What are the essential features of an effective program of testing and evaluation, diagnosis of learning difficulties, and remedial teaching?

A Definitely Organized Sequence

Returning to the first question: Shall the content and plan for teaching arithmetic be organized into a definite course of study with a specified sequence of learnings to be sought?

The term "number system" indicates an arrangement of number facts in rational connection, an organic whole with interrelated parts. The purpose of arithmetic teaching in the schools is to develop in children some comprehension of the existing relationship between numbers. Some of the relationships are much more obvious than others and therefore much more easily comprehended. But even these more apparent relationships do not impress themselves upon children without their attention being drawn to them. Like primitive man children would have to blunder clumsily into a grasp of number relationship if definite guidance were not provided for more economical learning. Courses of study outlining a learning sequence have been designed to guide teachers in presenting the facts and processes of number.

An organized and sequential body of learnings, such as are involved in arithmetic, should not be presented to children in a haphazard or chance manner. Just as the understanding of a complex sentence depends upon familiarity with the simple sentence, the more complex mathematical relationships depend upon comprehension of the simpler ones first. This is no new thought, but in an attempt to make arithmetic more meaningful to children, some teachers have replaced the planned-in-advance course of study with a teaching procedure which attempts to utilize whatever opportunities arise. This change may not be wise. It would seem that a stated sequence of learnings is needed as it is the sequence the teacher is attempting to make meaningful to the child. The flexibility in the teaching plan rests with the teacher and with the learner. How and when the learner can be helped to become aware of this sequence is a matter of real concern and requires constant alertness. The way in which a course of study is used is the important issue, not whether or not a well-defined and specified sequence is before the teacher. If understanding of the number system is the ultimate goal such a sequence must be considered. But having a sequence to be mastered does not mean that it comes first in consideration. Its apprehension by the pupil is an immediate and an all-important interest.

An Arithmetic Period Essential

The next question is closely akin to the matter of a planned order of teaching, namely: Shall arithmetic teaching be confined to a particular time

of day or shall it be threaded through the entire day, incidentally, as needed by children when solving problems which may arise?

Neither plan is adequate by itself. There should be a time set aside in the day for the direct instruction in arithmetic. Children cannot be expected to give their attention to the detail of arithmetic if their attention is on other outcomes of more immediate interest to them. Arithmetic is sufficiently difficult to demand the full and concentrated attention of pupils. Ability to use arithmetic facts is developed through repeated experience in manipulating these facts. There must be time for guided initial learning, for maintenance of previous learnings, and for the teacher to keep informed regarding pupils' mental reactions to the material which the teacher is attempting to have them understand.

On the other hand, children will never realize the usefulness of arithmetic nor learn to apply it without assistance in solving problems whenever and wherever they arise. A provocative learning environment should include many requirements for the use of arithmetic. The program of arithmetic teaching will be dull indeed if restricted to a single period of arithmetic teaching. Such practice contributes directly to the lack of interest and of understanding which characterizes the teaching of arithmetic in many schools.

Certainly arithmetic should be threaded through the entire school day but, as has been indicated, should not be incidental nor accidental. When children are engaged in measuring for construction or in solving any problem in which the mathematical aspect is a means to an end, that is not the time to teach them the involved numerical detail. If attempted, such imposition usually results in impatience and, at best, distraction. However, events such as these should be recalled for analysis at a time when the pupil's full attention is on arithmetic. These experiences are invaluable as motivation to the teaching of number relationships. Appreciation of arithmetic and the need for studying it cannot be expected if pupils are not given frequent opportunities to discover its utility.

Mathematical Values in School Experiences

The third question: Are there mathematical values other than those resulting from a direct study of numbers which should be given a place in the elementary school? was well answered by a group of teachers who were asked the question. They were agreed that the following activities which did not involve the direct study of number had definite mathematical values for elementary school children:

Construction work of all kinds

Estimating amounts, space, and time

Banking

Budg[illegible] paper, instructional equipment, and supplies in general

Buying and selling
Keeping records of all types
Figuring daily lunch costs
Keeping margins on papers, mounting pictures, and arranging books
Studying the meaning of words which have quantitative derivation
Comparing size, bulk, amounts, and quantities
Reading and discussing numerical comparisons
Thoughtfully considering relationships expressed in words such as: over and under, near and far, above and below, high and higher; between, among, and beside
Thinking quantitatively of community needs
Studying proportion, balance, and placement
Comparing tonal placement on numerical scale

By implication these activities suggest a correlation of mathematics with science, social studies, reading, art, music, physical education and in-and-out-of-school experiences in general. As thus conceived, the curriculum becomes an interlaced network of activities for children with major lines of endeavor signified by emphasis only, not by segmentation into compartmentalized areas. This viewpoint is not one which practice verifies. Often it is accepted in theory but rejected in practice.

The Problem of Grade Placement

The fourth question, which relates to grade placement, is another debatable issue. If teachers ask themselves by what criteria the teaching sequence of topics in arithmetic can be determined it is a less difficult question to answer than if they become involved in questions of grade placement. The Committee of Seven of the Northern Illinois Conference on Supervision has demonstrated a procedure for determining when topics in arithmetic can be taught with economy.[1] By teaching experimentally the several topics such as column addition, compound multiplication, the division of fractions, and the cases of percentage to children of given mental ages, and later by re-examining for retention, the Committee of Seven amassed data which were used in establishing the mental age levels at which pupils best retained their proficiency in the several topics. The criteria set up by the Committee are helpful but there are further practical considerations which complicate the use of the criteria. Grade grouping according to mental age is not a universal practice. Likewise teaching skill is not universally the same. To premise the placement of topics to be taught upon two such variable factors invalidates any assumption that grade placement can be determined with

[1] Howard C. Storm, "Grade Placement in Arithmetic—a Summary of the Findings of the Committee of Seven," *Illinois Teacher*, XX (December, 1931), 113-114.

certainty of success. Every school district needs to experiment for itself and make its decision regarding grade placement with all conditioning factors considered.

It is possible that as arithmetic teaching is examined more intensively we will learn to adapt our program of teaching to the child's progression. Great progress has been made in providing reading instruction and reading materials to suit individual reading needs, irrespective of grade placement. In fact, most of the new readers make grade designations inconspicuous so that any reader may be used with satisfaction by children needing such reading practice, be they in third, fourth, or sixth grade. In the upper elementary grades the initial teaching of arithmetic processes may be more difficult to provide than reading instruction, but by grouping children into three groups within a given class there is the possibility of meeting arithmetic needs more adequately than is usual. Readers are usually of a certain grade difficulty, but teachers have ceased to be greatly alarmed if all children in a classroom are not using the same reader. Their needs are being met more closely if they are not attempting to use the same reader. Educators should be interested in establishing a sensible grade placement of topics in arithmetic and then in proceeding to use that sequence of topics as the program through which each child will move as his ability will permit. All children in a given grade will not be attempting the same arithmetic.

Using Arithmetic to Solve Discovered Questions

The reason for the difficulty encountered in putting into practice a plan such as this is to be found in the manner of teaching. The next question was raised to direct attention to this particular problem. It is this: What should be the function of the teacher, to develop methods of discovery and learning, which pupils may use to determine results for themselves; or to demonstrate the procedures, which the pupils then learn and use? Most arithmetic teaching is devoted to the latter purpose, that of demonstrating procedures which are memorized, practiced, and in some cases applied in so-called problem solving. Most teachers consider arithmetic to be a series of facts to be learned and later put together and used. This may be a rather extreme statement but it does explain much of the teaching that is going on in our schools. It takes a stimulating environment to cause children to discover where arithmetic applies and then make them want to learn how to use the arithmetic which solves the discovered question. For the most part, teachers present ready-made problems to children rather than using the problems of their environment. Many teachers do all the arithmetic involved in children's banking, in the keeping of the milk or orange juice accounts, and in the handling of lunch or ticket money in order to save time for children to practice addition, subtraction, multiplication, and division combinations. In these classrooms, the teachers are not concerned with helping pupils to discover what facts are

needed in the transaction of their own immediate affairs and in guiding pupils in the learning of these facts. They think that they are eliminating distractions so that children may concentrate on procedures which they should learn.

Teachers in general are not aware of the opportunities for helping children to discover where arithmetic is needed and for acquiring the necessary skills for answering the discovered problems. As H. G. Wheat has said, arithmetic teaching should focus on the elimination of problems.[1] As ways of answering questions are found, the question is replaced by certainty. Instead of being guided by this philosophy of arithmetic teaching, most teachers depend upon some author's imagined program of needs rather than by utilizing the situations commonly occurring in every classroom which require answers derived from experience with number. Textbooks should supplement experience but not crowd it out as so often happens. The predetermined sequence of topics and methods of teaching should be secondary to the child's self-discovered need for arithmetic.

Practice in Arithmetic

A question which immediately arises in connection with this proposed utilization of problematical situations in the school and out-of-school experiences of children is this: What is the function and what is the place of practice? Briefly stated, the answer to the first part of this query is that the function of practice is to fix acquired meanings and understandings. The answer to the second part is that the place of practice is always subsequent to the actual understanding and comprehending of the ideas to be practiced. Practice is useless without understanding. As Wheat says, practice should be practice in thinking rather than practice in remembering. A pupil should know where the facts fit and what they mean before he is asked to practice them.

But practice does have a definite place in the arithmetic program. The chance meeting of number combinations will not fix them in the child's thought. Repetition is necessary if skill in the manipulation of number is expected. However, there is much to be said concerning the kind of practice that should be provided. It is absolutely necessary, if practice is to be well directed, for the teacher to know exactly how the pupil is thinking arithmetically. Only the clearly understood facts should be included in repetitive exercises. This means that the teacher must have ample time and opportunity for individual conference with each child in order to determine how he is reacting mentally. When the principle underlying the number relationship is understood and only increased familiarity with the mechanics is necessary to make the mechanics useful to the pupil, then is the time to help him to see that practice will make him more proficient.

[1] Harry Grove Wheat, *Psychology and Teaching of Arithmetic.* Boston: D. C. Heath & Co., 1937.

Poorly directed practice is worse than being wasteful of time. It not only results in little arithmetic learning but may lead to a mind-set against both arithmetic and school in general. Many children who dislike arithmetic think of it as burdensome pencil-and-paper work which has little or no practical meaning. Unless practice produces results of which the pupil can be made aware, it will fail to fulfill its function. Pupils should be helped to an appreciation of the fact that problem situations will be met with greater ease and facility if they will apply themselves intelligently and enthusiastically to a mastery of number combinations.

Evaluating the Results of Arithmetic Learning

The last question is one which covers a large area: What are the essential features of an effective program of testing and evaluation, diagnosis of learning difficulties and remedial teaching?

The most essential feature of any attempted evaluation is that it should reveal to the learner, first, how well he has succeeded in carrying to completion that which he has attempted, and second, what his exact pitfalls and weaknesses are. Incidentally, the learner's revelation is likewise the teacher's revelation. The emphasis should be placed upon the pupil's opportunity for discovering his strengths and weaknesses because so often the testing is an imposed check-up initiated and administered by the teacher for the purpose of ascertaining whether the teaching program is bearing fruit. All too often the pupil's estimate of his own work is lacking. Any testing or evaluation which is worthy of the pupil's time should be analyzed by the pupil himself for whatever guidance it may give him in directing or redirecting his energies. Children of any age should be included in this consideration. If a test is worth the giving and the taking, it is worth the pupil's appraisal. The appraisal process will have to be guided by the teacher until the pupil learns to analyze test results for himself. In other words, the teaching of any process in arithmetic is not completed until the pupil has had a part in ascertaining his degree of mastery and possible weaknesses which need to be overcome.

Another important feature of testing and evaluation is the requirement that tests used be sufficiently comprehensive thoroughly to test the expected learning. This means that enough test items be included to discover all misunderstandings. Too few items may give a false estimate of a pupil's ability. Since tests should not be thought of as hurdles to be jumped in order to proceed to the next topic, but as an essential part of teaching, it is desirable from both the teacher and pupil angle to have them accepted in the same way that any other step in the teaching-learning process is accepted. If such is the case, both the teacher and pupil should want an adequate evaluation because of the possible indications for better understanding.

Remedial or reteaching which grows out of the needs discovered through thorough and careful evaluation should be most pointed and directed at

definite misconceptions and deficiencies of understanding. Only through exact diagnosis can each individual pupil's errors become known and eventually eliminated through reteaching. It is a common occurrence to have pupils go year after year and from grade to grade making the same identical errors or not knowing some of the basic and elementary arithmetic facts. This wasteful and discouraging practice is due to faulty diagnosis and lack of provision for pertinent reteaching. While maintenance of skills may be assured through a carefully planned program of practice, such practice will not remedy deficient learning nor correct mislearning. Remedial instruction in arithmetic is often necessary for many pupils in a given school. Unless this need is met fully and completely, inaccuracies and underlearnings will persist. Only exact knowledge is worthy of arithmetic teaching efforts. The entire instructional program should be directed to this outcome.

Conclusion

There is a dual psychology involved in the teaching of arithmetic. The number system is a sequence of relationships to be understood but when and how those relationships can be given meaning to children is likewise a sequence about which teachers need to know more. While teachers believe in having children learn all they can about the number system, they must not preclude opportunities for children to discover where and how to use number. In her enthusiasm for having children learn all the details, the teacher may get the mistaken idea that at some later date they will use the learned facts. The teacher must constantly make certain that children see reason for arithmetic as well as the reasonableness of arithmetic.

WHITHER THE KINDERGARTEN?

DOROTHY W. BARUCH, *Professor of Education, Director of Preschool, Broadoaks School of Education, Whittier College*

A challenge to examine ourselves; a note to read before reading further: This is a disagreeable article. It sees the worst side and presents it blatantly. It makes no attempt to offer excuses for the procedures, practices, and attitudes it criticizes. But its cruelty is tempered by the author's belief in teachers as people and in their desire and ability to reorient themselves when their eyes see clearly. Surgery sometimes helps to clear vision. Yet if you personally cannot stand the idea, better stop here.

* * *

The usual crowd rushes up to the platform after the speaker has finished. (Kindergarten teachers all.) They have questions. By their faces, one would guess, important questions. They ask them with seriousness, with intentness of purpose.

"What shall we do about scissors?"

"What units do you think would be all right?"

"What about pictures on the wall? Should you hang them high or low?"

"Could you give me dimensions of the blocks you recommend? And the number of each size."

"Do you believe in excursions?"

They go on ad infinitem. Among them they ask not one single question about Johnny. Johnny is lost amid the shuffle of clay and paints, animals and stories, and concern as to whether nails should be fat or thin.

These teachers are earnest. They are interested in their profession. They are conscientious and hard-working. But they are looking up a street that ends sooner or later in a blind alley. They have been pressed in patterns that were formulated before the world knew better and they haven't had chances to catch up with what a later world found out. They need—how they need—to look at children harder, and to look less hard at what to do. Consider the question, "What shall we have children do?" Should it not always be tempered by, "How shall we help them grow, living more richly?" And once in a while, wouldn't it be well to stop, not at, "What shall we do with them?" but to add, "What are we doing *to* them?"

What are we doing to these children who come into kindergartens? Are we helping them grow, living more richly?

Here are some pictures. They are taken from firsthand observations in a variety of kindergartens. When placed under focus and examined, they do much to shed light.

In the Name of Art

A little boy, not-quite-five, is painting. He splashes colors over the sheet. Huge blobs and small blobs of color. Some thick, short streaks between.

A five-year-old girl is at another easel. The crude outline of a figure appears. Eyes, mouth, curls; hands, and in one hand a long, slender object.

"It's an umbrella, here, for when it rains, 'cause it's going to rain," the artist murmurs to herself, and starts to take out thumb-tacks as gesture that her painting is done. She wears a smile of deep satisfaction.

Up comes the teacher. "Why, Marylin, look. You're not finished. We don't leave pictures that way."

Marylin looks puzzled.

The teacher explains. "See all that space," pointing to the background that has been left untouched.

Marylin takes a turn at explaining, "It's sky. White. Like when it's just before it rains."

But the teacher does not hear. She has moved on to the boy.

"Tommy, we're painting people today. Don't you remember?"

Tommy mutters, "I don't wanta paint."

Sweetly, the teacher, "Now, how do you make a head, Tommy? A circle for the head. Remember, Tommy? . . ."

Then back to Marylin, who again has started taking out thumbtacks.

"Marylin, I told you to finish that picture."

"But . . ." says Marylin.

"You know we always finish things." Then with kindly compromise, "But maybe Marylin is tired of painting today. You may take it down now, dear, and put it in the closet and finish it tomorrow."

"But . . ." says Marylin . . . "sky *is* white *sometimes* before it rains."

What has the teacher done? Has she been fostering creativity? Obviously not. She has made two children feel that their ideas are not good enough. She has made two children feel that if they are to do something worth while, they must become hypocritical. They must seem to want to do something they don't want to do. She has almost made Marylin become untruthful. She wanted Marylin, who had finished, to say she hadn't finished. But rugged little Marylin stuck to her guns. (Many children wouldn't.) She has shown Marylin, too, by not listening to an explanation that was important to Marylin, that it's no use trying to communicate one's view to others. (Fine foundation for conviction as to the uselessness of trying to arbitrate and the need for stronger methods.) And, judging, if one can, by Tommy's face, she's put hatred and fear in his timid heart.

Art is supposed to free man, to let him feel, at least for a few moments, untrammeled, to let him feel the flow of a material under his fingers respond-

ing to his will. (So few things do.) The limitations of a child's limited motor co-ordination and other ineptitudes, these will have to be met as hampering forces. But why put other hamperings in his path? Why couldn't the teacher have realized that even one little blob on a large piece of paper is enough if it means something to a child, if it satisfies anything in him, if it releases him in any way. Teachers need so much to know that as children progress at their own pace, their blobs usually evolve, very gradually, into symbols that are easier for others to read. They need to know that gradually, too, children begin to focus on product, rather than on process, and that they will then seek techniques for developing skills. But these things happen almost never in kindergarten. And if we force them we are apt to cripple ingenuity and originality for all time.

Crafts Too

They are all working with clay, forty of them, on brightly oil-clothed tables.

"You roll a little ball, this way, first," says the teacher.

They do.

"You roll a big ball, this way, next," says the teacher.

They do.

"And you put them together."

They do.

"And now, children, you can make the eyes and nose and mouth."

They do.

"Good. We have such lovely snow men."

A bell rings. The teacher glances at the clock.

"My, goodness, time for recess. Let's put our things away quickly . . . Into the clay can, children . . ."

And in go the clay snow men, one after another, while the teacher presses them neatly flat.

One thinks, as one watches, of a contrast. Two five-year-olds in another kindergarten with hands in, kneading with finger-dirtying enjoyment at the feel of the clay. No more. Another child, close by absorbed in pressing clay, "flat, flat, flat, as thin as it can go without holes." Another still, making out of clay, "a dog who's crying." All of them, experimenting according to their level of development. All of them obviously getting some inner satisfaction out of manipulation, according to their own wishes, of a yielding, pliable substance (at a period in life when so many substances are guarded from punchings and pinchings, and slappings and messings).

But what was the teacher of clay snow men doing? Helping children gain through experience the democratic concept that different people are different and like to do different things? Helping them know that they are

capable of working independently, of making their own choices as to what they wish to do, and of carrying through activities to their own ends? On the contrary, she has kept them dependent on her, every step of the way. She has given them mighty fine training in following the authoritarian word, and in helping them need it to feel capable of doing what is acceptable in society. She has taken from them, too, an opportunity to carry out meaningful activity. For, what meaning can snow men have to California children who have never seen or felt snow?

But worst of all, the teacher has shown these children that work is useless. They have worked—what for? To use what they have made? No. Not even to enjoy it. For, they have thrown what they made into a clay can and their teacher has demolished it bit by bit, pressing it into flat nothingness.

Again, too, the teacher has needed to see that pinchings and thumpings and jovial messing may be enough in kindergarten; and that skills and focus on end products come later. And she has needed, in addition, to realize that even though the child's emphasis is not on the perfection, or high standard, of end product, none-the-less his crude handiwork may have a significance to him which makes him want to "keep it" for at least a little while.

Free Play—So-called

They are playing in the doll-corner, these two little girls.

"I want to be the baby who's sick," says one.

"No. I want to," says the other.

"But, I want to."

"Well . . . maybe . . ." (It looks as though an idea toward solution were germinating in the first child's head . . .)

In steps the teacher. "Listen, Louise and Stella . . . Stop quarreling. I think the best way for you to settle this will be for Louise to be the baby. She's the smallest, and babies are always smallest."

As her back turns, Stella mumbles, "But I want a turn."

What has the teacher done? She has deprived the two of effecting worthwhile social adjustments for themselves. They might have quarreled a bit, fought a bit. But in the process of muddling through, they would have been helped toward feeling capable of working out points of disagreement with others. Again they were being deprived of experience in the democratic way.

Teachers need to realize that it is important to permit quarreling at this early age. They fear erroneously that if children fight, that they will become permanent fighters. But when a person knows he can fight his own battles, when he feels he can stand on his own two feet, just the opposite happens. He no longer needs to fight to prove his own strength. Teachers need to stand back and watch carefully. It's time to enter only when one sees with

certainty that the children cannot possibly work the conflict out for themselves without hurt to one or the other.

Enough of such pictures. We need to move on more rapidly. Let us, therefore, consider some challenges unadorned. (Remembering, however, that every allusion to what is done is based on actual observation.)

Music—Appreciation or What?

Think of what's done often in the name of music. All the children are told to march or step high like horses. Regimentation again. But when they are told all to hop, or skip, another, and worse, element enters. Some five-year-olds can't hop or skip. They haven't sufficiently developed motor co-ordination at their command. They are being asked to do what they are unable to do, or what may be excessively difficult. A feeling of inadequacy is bound to follow. And sometimes an attitude is born toward school as being a place where what one *can* do is just not good enough.

It is easy to talk glibly of individual differences. It is harder to carry out procedures that allow for individual differences. Why can't children be allowed to respond to "galloping-horse" music according to their individual development?

The Question of Evaluation

Then there are the evaluation periods. Some terrible things happen to children in the name of evaluation. Here is a child who has struggled over a crude little airplane at the carpentry bench. He carries it tenderly around. He looks proudly at it and fingers it lovingly every few seconds. Then comes evaluation.

"Look, children, what would you say about Sam's airplane?"

"It's crooked. One wing's too long."

"It's got a propellor that's not really in the middle."

The criticisms go on. Poor comfort at the end when the teacher says, "But otherwise it is a nice airplane."

In evaluation period the timid child is apt to suffer, the self-conscious child is apt to become more self-conscious. The opposite also happens. The critical child becomes more critical, the center-of-stage-loving child more center-of-stage-loving.

How can little children be expected to measure their criticism in terms of what the other fellow can take without emotional hurt? How can they know when effort has been first-rate, even though end result is fourth-rate?

Again, too, evaluation is stressing product when, at the kindergarten level, the child's emphasis is on process. Perhaps he gets more out of the swing and pound of the hammer than out of the fact that he has incidentally made something. By emphasizing what is not important to him we are letting him know that we understand him not at all.

Discipline Is Still Punishment

Perhaps we do not understand him. Certainly the discipline we use could frequently lead to this conclusion.

Here is a child sent into the principal's office and kept there for an entire morning because when the teacher asked him to sing a phrase by himself in front of the group, he hung his head and said, "I don't want to." Of course, he didn't want to. He was a monotone. Having faults corrected in front of a group is no fun. Even if he hadn't been a monotone, being asked to sing before a group might have embarrassed him. (It's asked too often of children. Singing then stands for performance instead of enjoyment.)

Here's another child; he is sitting in a corner on a chair, head hanging low. What has happened? "Oh," the teacher explains, "he was too slow. He took too long to put his blocks away this morning. So, he has to think about it for a while."

How long had he been there?

"Half an hour."

Further questioning brings further elucidation. It seems he had made a railroad track. Obviously putting the blocks away involved breaking up the track. Here, at last was a child doing the thing the teacher has stressed all along the way. He was putting emphasis on end product. He has wanted to preserve his track. So the teacher punished him for it. (What about this consistency on which we pride ourselves?)

Here is a small girl. She's new. This is her second week in the kindergarten. She, too, is sitting on a chair. What has she done?

"She's been selfish."

"How has she been selfish?"

"Well, you see, she had the black toy dog all last week and she wants it again this week and I told her she had to give some of the other children a turn. She wasn't doing anything with it anyway—just holding it."

No, it hadn't occurred to the teacher that clinging to something in a strange place might have been necessary to comfort one's feelings of strangeness. It hadn't occurred to her that the closeness of something—just anything—might make one feel less isolated. Instead, here was isolation doubled. The feeling of strangeness and separateness from the group was being fortified by the child's being placed apart from the group—alone, and in disgrace, on a chair.

The little chair—off in the corner. The little chair—at the side of the room. Or the big chair in the principal's office. How often these are the fate of a child who has done silly or disturbing things because of a basic feeling of discomfort or insecurity. How often these chairs pile discomfort upon discomfort and increase insecurity.

Why can't teachers first try a little more affection, a little more warmth? For, when a child feels that he has a place with the teacher, a first step toward greater security in school has been made.

Wad Some Kind Pow'r the Giftie Gie

Why can't more teachers be warmer? Why can't more teachers be human? Why do so many have to wear a manner that is so *sweet* that it reeks of artificiality and that it gives the impression of being a coat of veneer that covers something that wouldn't be so sweet if it only dared break through?

"Now, boys and girls, Mrs. Jones has a very nice visitor. And Mrs. Jones is going to show the visitor all the lovely Mexican hats you made. Now you be very nice little people and keep very quiet."

Could there be a better challenge to shriek?

Why be so sweet. Why not be honestly oneself? Why not, unless oneself is the kind of person one is ashamed of? And then one shouldn't be in the teaching game. Why not just be natural—warm, outgoing, not too perfect, sometimes cross, sometimes stern—why not?

Excuses

And why not be able to say, "We've got faults. We've learned many things that we should be unlearning. We need to learn many things we've never learned. Let's get at them." But we rarely do this. Usually we defend ourselves. We give a million excuses.

"We can't possibly take records. We've got too many children." And yet some teachers manage to. They know how much a few comments written down about a child can increase vision. "You don't see a child till you write down what you observe about him," said one. "So, I make notes on two of my children every noon and in a month's time I've been around the group and can begin all over again." There are many ways of working out simple progress records.

"We can't possibly work with parents. We have no time." And yet some teachers manage to. "It's easy when you once begin," said one. "I used to think parents around the school were nuisances. Now I realize what grand help they can be. They come in and observe. We talk things over. I see them individually. And once a month we have a group meeting in the evening so the fathers can come too. And, believe me, we're getting somewhere, because we all talk the same language."

In one kindergarten room, a pile of books reveals such title as, *The Sleeping Beauty, Merry Murphy—The Live Potato, The Night Before Christmas* (in June!), *Snow White*. The books are all cheap editions with horrible, glaring pictures.

"But," says the teacher apologetically, "we can't get decent books. We haven't the money."

One wonders whether she knows what kind of books are good books for these children, and whether she's ever heard that there are libraries.

In another room, the children sit fringing rounds of yellow crepe paper.

"We're formal today," the teacher offers excuses. "We're always formal for the first two weeks of the new semester. But if you were to come next week, you'd see us carrying on an informal program." As if one could suddenly turn formality off and switch informality on.

Well, so it goes. We do this. We do that. We don't do this. We don't do that. We finish paintings; we fill in spaces when the paper is empty; we put blocks away when we finish playing with them; we don't keep a toy dog or any other toy for too long; we give turns to others . . .

Let's throw the rules overboard and begin to learn about children.

THE SANTA BARBARA COUNTY CODE OF ETHICS FOR THE TEACHING PROFESSION

MARY C. EVANS, *Teacher, Montecito Elementary School, Santa Barbara County*

One of the most stimulating and worth-while activities participated in by the Santa Barbara County teachers and administrators during the past two years has been the building of a Code of Ethics. It has been an activity in which a large percentage of the county teachers have shared, and which should prove valuable, not only to this teaching group, but to teachers in other places as well.

From its very beginnings, the history of the Code has been an interesting one. It really had three distinct beginnings, although they were practically simultaneous in time, and found their inspiration in a common source. The Code was the direct result of a very interesting and inspiring address made at a combined meeting of the three professional organizations in the county, the Principals' Association, the One-Room Teachers' Association, and the Primary Teachers' Association, by Dean Grayson N. Kefauver of the Stanford University School of Education early in the school year 1938-39. Dean Kefauver spoke on public relations, and those who were fortunate enough to hear him left the meeting convinced that in order to have a really effective public relations program, teachers must first clarify in their own minds their conception of teaching as a profession. It was in attempts to make such clarifications that the Code of Ethics was born.

After Dean Kefauver's address, each of the three county professional organizations voted to draw up a code of ethics. Committees were appointed in each organization, the members of the organizations offering many and varied suggestions for items which they felt should be incorporated in such a code. Then it was realized that the three organizations, working together, could contribute a more valuable service by uniting their efforts in the formation of a code of ethics, not just for classroom teachers, but for workers in all fields of education. Accordingly a central committee was formed, composed of two members of each of the professional organizations. This committee worked long and arduously, sifting and organizing the many fine suggestions offered by the organizations they represented. It was felt that the Code should have a preamble which would express worthily the ideals as members of the profession of education, and at the same time the committee was anxious to incorporate the many excellent practical suggestions made by teachers and administrators in the county. This necessitated drafting and redrafting the Code many times before it was finally in a form to be presented to outside individuals and organizations for suggestions and criticisms. The Code in revised

form was again presented to our own organizations on February 9, 1940, and to representatives of the various high schools in the county, the Schoolmasters' Association, The Santa Maria City Teachers' Club, a representative of the Santa Barbara City Teachers' Association, and Dean Kefauver who had helped the committee from the beginning with advice and suggestions. Representatives of three other professions, a physician, a trained nurse, and a lawyer were also invited to attend the meeting. The suggestions offered at this final meeting, and suggestions made subsequently by county high school faculties to whom the Code was presented, resulted in a revision of the Code of Ethics to the form in which it stands today.

It is the hope of those responsible for the formulation of this Code, that it will be a dynamic one, changing with the changing needs of the professional groups it represents. Each organization has elected to have a permanent Code of Ethics committee. Further, it is the hope that the Code will be useful in promoting a feeling of professional pride in the new teachers entering the county, and that it will keep professional ideals clearly before those who are already serving the county schools. It is also the belief of the teachers that the Code may have some effect on the attitude of citizens towards education. However, should it accomplish none of those ends for which the teachers hope so confidently, they still feel that the building of the Code has been a highly stimulating and worth-while experience for the many teachers and administrators who have participated in it. It has, above all else, clarified their own conceptions of what real education should mean, and has rekindled their loyalty and enthusiasm for their chosen work.

ETHICS OF THE TEACHING PROFESSION

(Revised February 15, 1940)

PREAMBLE

The profession of education has for its prime object the service it can render to humanity. In choosing this profession, an individual assumes an obligation to conduct himself in accord with its ideals. It is the educator's duty and privilege to uphold the dignity and honor of his vocation, to exalt its standards, and to extend its sphere of usefulness. It is also the responsibility and privilege of the educator to instill in himself and his pupils an understanding of and an allegiance to the highest ideals of American democracy, and to carry on his work in accord with these ideals. The profession of education calls for individuals with sincerity, creative ability, professional skill, effective and wholesome personality, the capacity for hard work, and with a realization of the importance of the intelligent use of time.

ARTICLE ONE—RELATIONS TO THE PROFESSION

Section 1. Educators should hold their profession in high esteem. Only the ablest should be encouraged to enter the profession, and those who

are merely using the teaching profession as a stepping stone to some other vocation should be definitely discouraged from entering it.

Section 2. The educator should maintain his efficiency and teaching skill by study, and by participation in local, state, and national educational organizations, and should contribute his time, energy, and means, in order that these associations may more fully represent the ideals of the profession.

Section 3. The educator should seek worth-while self-improvement by educational, occupational, excursional, and recreational means throughout his professional career.

Section 4. The educator should not exploit his school or himself by personally inspired press notices or advertisements, or by other unprofessional means, and should avoid innuendo and criticism, particularly of successors or predecessors.

Section 5. The educator should not apply for another position for the sole purpose of forcing an increase in salary in his present position. Correspondingly, school officials should not pursue a policy of refusing to give deserved salary increases to their employees until offers from other school systems have forced them to do so.

Section 6. While not limiting his services by reason of small salary, the educator should interest himself actively in any movements for the establishment of a suitable salary scale for the teaching profession.

Section 7. The educator should not act as an agent, or accept a commission, royalty, or other reward for books or supplies in the selection or purchase of which he can influence, or exercise the right of decision; nor should he accept a commission or other compensation for helping another teacher to secure a position.

ARTICLE TWO—RELATIONS TO MEMBERS OF THE PROFESSION

Section 1. The educator should have a high sense of loyalty to the educational system under which he is working. He should guard against making thoughtless or derogatory remarks, or exaggerated generalizations which might present the educational program in an unfavorable light. When he hears unfair criticism of the educational program, he should feel responsible for presenting a more constructive view of it.

Section 2. An educator should not interfere with another educator in matters such as discipline, except in cases where physical or mental harm is being done to pupils.

Section 3. A teacher should avoid unfavorable criticism of other teachers except such as is formally presented before the board and in the presence of the teacher criticized in the interest of the school, and should

report to duly constituted authority any matters which involve the best interest of the school.

Section 4. An educator should not apply for a specific position unless a vacancy exists. Unless the rules of the school otherwise prescribe, he should apply for a teaching position to the chief executive. He should not knowingly underbid a rival in order to secure a position; neither should be knowingly underbid a salary schedule.

Section 5. There should be co-operation between administrators and classroom teachers, founded upon sympathy for each other's point of view, and recognition that the improvement of teachers in service becomes not only an administrative function in which teachers participate, but also a teacher function in which administrators participate. Both teachers and administrators should observe professional courtesy by transacting official business with the properly designated person next in rank.

Section 6. Qualification should be the sole determining factor in appointment and promotion. School officials should encourage and carefully nurture the professional growth of worthy teachers by recommending promotion, either in their own school or in other schools. For school officials to fail to recommend a worthy teacher for another position because they do not desire to lose his services is unethical.

Section 7. Teachers and administrators should co-operate in the allocating of an educator to a place where he or she is successful.

Section 8. Testimonials regarding a teacher should be frank, candid, and confidential.

Section 9. A contract, once signed, should be faithfully adhered to until it is dissolved by mutual consent. In case of emergency, the thoughtful consideration which business sanction demands should be given by both parties to the contract.

Section 10. Due notification should be given by school officials and teachers in case a change in position is to be made.

ARTICLE THREE—RELATIONS WITH PUPILS AND TO THE COMMUNITY

Section 1. The educator should seek to develop friendly and intelligent co-operation and understanding with the parents and other members of the community, and should seek also to enlarge and clarify his own understanding of the community in all its aspects, to the end that the school may be of greater service to the community.

Section 2. The educator should maintain a positive, forward-looking attitude, seeking ways of improvement and emphasizing the fine things in the school program, thus building professional unity and public confidence.

Section 3. The educator should seek to co-operate with and participate in civic improvements and worth-while activities of the community.

Section 4. Educators should be interested in a high standard of efficiency, and should voluntarily organize to act with administrators and others —in some cases the board of education—in guaranteeing it to the public.

Section 5. In instructional, administrative, and other relations with pupils, the educator's attitude should be impartial, just, and professional. The educator should consider the different interests, aptitudes, abilities, and social environments of the pupils.

Section 6. The professional relations of the teacher with his pupils demand the same scrupulous guarding of confidential and official information concerning homes and parents as is observed by members of other long-established professions.

Section 7. The teacher should not tutor pupils in his school for pay. Nor should any teacher accept payment for any type of work, if in so doing, his efficiency as a teacher is jeopardized.

Section 8. The teacher should exercise his full rights and obligations as a citizen, but he should avoid expressing his personal opinion on controversies of religious, political, or personal propaganda which may tend to decrease his value as a teacher, and should see that all available facts on such issues are presented impartially to the student, allowing him to formulate his own opinions. The educator should in no way impose his personal bias or views on the student.

Section 9. The teacher, in his public relationships, should not permit his educational work to be used for partisan politics, personal gain, or selfish propaganda of any kind.

Section 10. The educator should respect the mores of the community in which he works, and should be careful that his conduct does not offend against these community mores in such a way as to impair his service to the community.

Section 11. The educator should recognize the vital importance of mental, physical, and emotional health to effective living, and should do all in his power to gain such health for himself as well as for his pupils.

SPEECH DEFECTS AND MALOCCLUSION[1]

SARA STINCHFIELD HAWK, *University College, University of Southern California; Child Guidance Clinic, Los Angeles and Pasadena*

It is generally assumed that when a baby begins his prattling and babbling, early in the first half year of life, he will develop normal speech habits, as a part of his human heritage. As this form of social behavior emerges at the appropriate stage of growth, it sets him apart as a thinking creature, with ideas to express, and with the necessary control of the speech mechanism. It is known that speech involves five different mechanisms, which are co-ordinated: (1) respiration, (2) phonation, (3) resonation, (4) articulation and (5) the motor speech areas of the brain which direct the speech movements. The child must have formed not only auditory impressions of how speech sounds, but visual impressions of how it looks, and perhaps most important of all, kinaesthetic impressions as to the feel of the muscles as they move. Finally, there must be a careful direction of speech impulses by the motor speech areas of the brain; word memories or word patterns must have been stored away and memorized; associations must have been formed between the motor and sensory pathways; and the entire process must have been well co-ordinated in order for a child to talk.

From the standpoint of speech, the teeth are important in many ways. First, they are needed to form the anterior wall for the oral resonance cavity. Second, they are needed to produce certain sounds, such as the *s, z, sh, zh, ch* and *j*, in which the movement of the jaw, directly up and down is of great importance for the clear, concise utterance of these sounds. In saying an open vowel sound like *ah* (the Italian a), the jaws are widely separated; in the speech patterns for *f* and *v* the teeth are nearly closed, as the lower lip covers the lower teeth and the jaw moves upward so that the lower incisors come to rest slightly posterior to the upper incisors, while each half of the lower lip moves toward the midline very slightly. This forward and upward movement involves both lower structures, teeth and lip.

In actual experience, the normal child sometimes deviates even in these simple sounds from normal speech at the start and says "put" for foot, and "base" for vase, using only a part of the necessary movements. Many children have difficulty on the hissing and buzzing sounds, *s* and *z*, as well as on their first cousins, *sh, zh, ch* and *j*. For the *s* and *z* many children lisp; sometimes they substitute a *th* sound, saying "thithter" for sister, or "thirkuth" for circus, but many times they merely blur or pronounce these sibilants and all blends

[1] This paper was presented before the Dental Section, at the Annual Conference of the California Association for Health, Physical Education, and Recreation, in Long Beach, March 15, 1940.

containing them indistinctly. These sounds are among the most difficult of language and in a checking over of some five hundred children of nursery school age and young children in speech clinics in Los Angeles, we have found these to be the ones on which the children make errors most frequently. Many of these children have marked malocclusion, but there are a surprising number who have apparently developed wrong patterns of movement, which are not due to dental malocclusion. We feel that we may perhaps present to you some new theories and suggestions regarding such children, as well as for those who are undergoing correction through orthodontia.

Any substitute sound early developed tends to persist as a habit, unless definite steps are taken, for correction. It is much harder to correct inaccuracies in adults than in children, in speech as in orthodontia. A child may have normal occlusion and yet have developed the habit of thrusting the jaw forward and outward slightly. This habit is observed very frequently in adults who ordinarily have the normal bite, but who have formed some peculiarities in making speech sounds, such as *s* and *z*. At the University of Wisconsin some years ago, we saw very briefly each student in the freshman class, expecting to find a high correlation between lisping and malocclusion; but we found as many lispers with normal occlusion, as without, and as many good speakers who had malocclusion, as there were lispers with a normal bite! We felt that the explanation might be in the fact that a person with a good ear and good motor habits could correct his speech in spite of poor occlusion in many cases. Others continued to lisp in spite of dental correction and normal occlusion.

Instead of thrusting the jaw forward, some children develop an end-to-end bite which blurs the speech and causes it to appear muffled and indistinct, even though there is no actual letter substitution, such as *th* for *s*. Sometimes these are cases which have had orthodontia; sometimes however, the bite has been entirely normal, and it is apparently only during speech that the jaw deviates in an unsatisfactory way. Chewing and nutrition are not undesirably affected, but the speech is peculiar. This sometimes gives the individual a peculiar offside smile or speech sound. The interference with normal sound production requires much energy; the jaw may make a forward and upward movement, instead of moving straight up and down, and the habit is as uncomfortable for the child as are poor postural tensions and faulty habits of reading under strain. It often seems to be largely poor habit, without a definite organic basis, in many cases.

Such false movements of the jaw may affect all blends containing *s* and *z* and be noticeable over the telephone, which reenforces some of the high frequency sounds; these sounds may reproduce badly in making a phonographic record, or may be unpleasantly hissed over the radio. This is serious, in modern speech situations and affects a great many people. Parents are often unable to correct the speech of the child, and may not even be aware that he

lisps or speaks inaccurately. Their own ears are not reliable in interpretation of speech sounds. Many adults have never had a speech peculiarity identified as a lisp in a whole lifetime of educational training and experience.

It is possible for the trained worker to observe normal occlusion in a good mouth and to observe how the speaker brings the jaw upward in a straight line, with tongue and lips adjusting to a normal closure. When the bite is not normal, the teacher may even aid in the earlier development of right habits of speech by working with the orthodontist, to see that the child forms the right patterns of movement at the start, even while the teeth are adjusting to new conditions and new movements.

The worker may help the child to form a correct impression of the right movement by placing the thumb and finger on the child's chin and directing the jaw upward in a straight line, as in a normal bite; the lower teeth are brought to rest, in speech position, just posterior to the uppers, and with just enough space between them for the escape of air as in the normal hiss and buzz accompanying these sibilants, *s* and *z*, but not leaving enough space for tongue protrusion.

There is a constant shifting of movements from one place to another in the mouth during speech, and in emphasis upon phonetics in the past, we have treated speech as though it consisted of a series of separate sounds, loosely strung together like beads, rather than as fused or blended into a single word pattern. We find in experimental work with young children and with aphasics that if the child learns merely individual letters or their sounds, and then tries to blend them, he may be unable to do it, and may lisp, stutter, or develop other unfortunate speech habits. It is always best, therefore, to give him the entire word-pattern, and to at least strive to have him produce the first consonant and vowel in a single act of articulation, as a blend or fused pattern, such as "daw" in dog, or "baw" in ball, even if at first he has too short a span of attention to add the final consonant. This is the way most babies learn to say words, in our experience with nursery school cases, and children with delayed speech.

We know that faulty habits of speech are more common among children of inferior intelligence than among those with higher IQ's; but there is no set pattern of speech which children inherit and they must learn correct speech habits and muscular control just as they learn to walk and to run.

In working with cleft-palate speech, it is preferable to work along with the dentist or doctor, as there is important work to be done while the teeth are working into position. Much grief and embarrassment might be saved the person who is undergoing corrective treatment, and much time might be saved by the speech correctionist and the dentist by working together on the correction of false habits, in control of the jaw as in speech. Children who are trained immediately after cleft-palate operation respond much more quickly than those who await the long process of dental development and cor-

rection before undertaking the speech work, as they learn the correct muscular patterns for speech, independently of whatever the doctor or the dentist may be doing. The two factors work together in producing a normal bite, a pleasing appearance, and comfortable speech. To the speech worker there are three important deviations from the normal bite which must be considered in our work: First, the protrusion of the lower jaw which interferes with a clear *s* sound; second, a wide space between upper and lower incisors when the teeth come together as in a bite; third, a sideways movement of the jaw such as we often observe in spastics. In all cases for economy of effort, it is the jaw movements which seem to us to be most important. It is important for speech, to train the child how to fit the lower jaw in its proper relationship to the upper teeth. A slight irregularity may prevent the child from fitting the incisors together and producing normal speech sounds. This is where the speech teacher may help the dentist. It is evident that the teeth are quite as important as the tongue in forming normal *s* and *z* sounds.

[Films were shown at the conclusion of this paper to demonstrate some of the effects of speech difficulties discussed.]

RADIO IN THE RURAL SCHOOL

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The use of radio in education is a subject in which modern educators are showing a very real interest. As one of the newer techniques of teaching, it can be a potent force in achieving classroom purposes, and can fill a definite need. How to make the most effective use of this new adjunct to teaching presents many challenging problems both to the teacher and to the broadcaster.

In order to secure a clearer picture of the situation in Fresno County, the authors recently conducted a survey to determine the amount of radio receiving facilities and the extent of their use in the schools. The survey covered the elementary schools of the county, and those schools which replied to the questionnaire represent an enrollment of 14,444 children.

Of the responding schools, 136 in number, only 80 reported having any receiving facilities, leaving 56 schools enrolling approximately 3,000 pupils without access to available educational programs. In the group reporting one receiving set, were 62 schools. Thus, of the schools with radio facilities, approximately 77 per cent have one receiving set. Fourteen schools indicated they are equipped with two receiving sets, and 4 schools have central sound systems. Of the schools reporting radio equipment, 47 indicated the approximate value of their installations. The average investment was $104.

Schools, generally, indicated that their radios were used more at eleven o'clock than at any other hour during the day. It is possible that this is caused by the fact that the Standard School Broadcast is on the air at that time. The average length of the listening period for each school was 31 minutes.

Radio programs were used much more frequently in grades V, VI, VII, and VIII, than they were in the first four grades, and broadcasts are used in the seventh grade more than in any other grade.

The survey showed that 64 per cent of the students in the schools with radios heard one educational broadcast each week.

The information gathered, indicated that the use of radio is equally divided between morning and afternoon programs, but eleven o'clock seemed to be the most favorable morning hour, and one o'clock the most favorable afternoon hour.

A summary of the use of certain current radio offerings is presented in the following tabulation:

Program	*Number of Schools Using Programs*		
	Regularly	*Occasionally*	*Never*
American School of the Air	32	20	3
Standard Symphony Hour	29	17	7
Special Features	15	41	3
News Broadcasts	6	31	9
Classical Music	1	19	16
Popular Music	1	8	24

Programs of the Columbia Broadcasting System and of the National Broadcasting Company are equally favored according to the reports of schools.

A question concerning radio as a helpful teaching device was given 58 affirmative votes against 3 negative. A similar question concerning the encouragement of greater use of the radio as a teaching aid met with exactly the same results. On the question of commercial advertising in connection with educational broadcasts, one school indicated a favorable attitude, while 49 were opposed to it.

Schools were asked to list the approximate per cent of their listening time which was devoted to instructional purposes and the amount devoted to entertainment purposes. The averages of the amounts given were 72 per cent for instruction, and 28 per cent for entertainment.

On the question of developing radio appreciation, 51 schools agreed that the school is the proper place for developing an appreciation of radio programs, while 7 felt that school time could best be used in other activities.

The majority of the schools which responded to the survey avoided the question of overemphasis of any particular subject-matter field in educational broadcasts, but those which gave their opinions felt that music was being overemphasized when contrasted to the time spent on other subjects.

The reverse of the above question, on the underemphasis of subject-matter fields in educational programs was also avoided by most schools; however, many felt that health, agriculture, nature study, literature, drama, safety, astronomy, historical events, and stories of people of other lands were underemphasized.

In reacting to the question of whether programs are a help or deterrent to learning, most schools stated that educational radio programs are above the primary and intermediate grade levels, and many felt they are above the upper elementary grade level; therefore, these programs are not useful learning devices.

Summary

1. While 80 schools in Fresno County representing an enrollment of more than 11,000 students have radio facilities, the 56 schools representing an enrollment of students with no radio receiving equipment, consisted of

small one- and two-teacher schools obviously in isolated areas, and without doubt these boys and girls are entitled to advantages which a radio would bring.

2. The survey shows the average investment of the schools with radio equipment to be $104, but only 80 schools have radios, and 62 of these have only one receiving set.

3. The schools which responded to the survey were overwhelmingly in favor of the use of radio programs as teaching aids.

4. The chief criticism of educational programs was that they were on too high a level for most elementary children.

5. There is a great lack of information on the part of schools concerning programs and the supplementary material offered by the various networks.

WHERE GOES ARITHMETIC?

FAYE GREENE ADAMS, *Assistant Professor of Education, University of Southern California*

Within recent years teachers have pointed proudly at the Indian pueblos and Mexican haciendas which have mushroomed in their classrooms, at the creative poems which adorn their bulletin boards, and at the collections of rocks and butterflies on the science tables. But seldom, if ever, do they mention the arithmetic experiences of their pupils. Questioned specifically, teachers admit, rather apologetically, that arithmetic has very definite curriculum requirements and that they spend a considerable portion of the school day drilling on arithmetic facts.

It is easy to understand the attitude of many elementary school teachers. Arithmetic has not been fashionable, and for very good reasons. Years after emphasis had shifted to the child and his needs, our arithmetic courses of study and textbooks continued to make requirements which failed to meet the needs of either the child or the adult. Firmly entrenched in both the elementary and secondary schools, mathematics has yielded more slowly to the more dynamic philosophy of the modern school.

Yet a careful analysis of the recent recommendations of specialists and the work of progressive teachers show that startling changes are being effected in the arithmetic field. While our attention has been focused upon some of the more colorful aspects of modern education, arithmetic has been modified quietly but definitely. Research has yielded valuable information about the curriculum; teachers have experimented with new techniques. If the better theory were applied only to the average classroom situation, arithmetic could no longer be classified as one of the fields in which schools are backward in accomplishment.

What are some of the recent outstanding changes in the arithmetic curriculum? There are many; but some of the most forward looking may be summarized thus.

1. *The integration of arithmetic with other school experiences.* Life in school offers many opportunities to make arithmetic a natural part of a learning situation. When the children plant a garden they must figure how many rows there will be in the plot, how many plants to the row, and how many plants for the entire garden. Before arranging the chairs for an auditorium program, the children must think through a plan showing the arrangement of aisles, and the number of chairs to be placed in each section. There always have been many opportunities to integrate number understandings with

other school experiences, but teachers, intent upon social and language outcomes, have failed to make the most of them. Fortunately, they are becoming more alert to the arithmetic possibilities involved in everyday happenings.

2. *The omission of systematic drill in the first and second grades.* Even small children find it necessary to use numbers in games, in measuring, and in many other situations. While there is every reason to believe that these number experiences should be continued in the early school years, there is no evidence to support the memorization of abstract number combinations through drill. Emphasis in the first two years of school life has shifted from drill upon facts and processes to experiences in which the child discovers the meaning and relationship of numbers.

3. *The shifting of curriculum requirements all along the line.* While there have been numerous studies on the placing of arithmetic topics and these studies vary somewhat in their findings, almost without exception they recommend a "stepping up" in the grade placement of most processes. Without doubt the maturity of the child is an important factor in determining the time at which a given process may be taught and retained with ease. In line with these studies we have seen many curriculum adjustments within the last few years. Two examples of this trend are shown in the shifting of long division from the fourth to the fifth grade and the changing of percentage and interest from the sixth to the seventh grades.

4. *The omission of useless processes in arithmetic.* Not so many years ago the arithmetic books for elementary school children bristled with least common denominators, metric measures, and uncommon fractions. Now there is a tendency to limit grade work in arithmetic to the arithmetic processes and concepts needed in life. "Social usage" has become an important criterion for determining the arithmetic curriculum. While we do not have at the present time a completely adequate basis for determining the arithmetic program, research studies furnish a starting point and the construction of a new and more vital curriculum is under way.

5. *The shifting emphasis from routine drill to understanding mathematical concepts.* In general the elementary school has placed too much reliance upon drill as a means of learning. In arithmetic the results of this drill program have been both ineffective and deadening to the interest and initiative of the child. Recent research indicates that the amount of drill required to fix an association depends upon the maturity of the child and upon his understanding of the concept. Unless the pupil grasps the significance of the numbers and has *insight* into the situation, time spent upon drill is uneconomical and futile. Insistence upon *meaning first* will do a great deal to free pupils of the heavy burden of drill which has harassed little children for the past decades.

6. *The change in the character of written problems.* For some time there has been a growing consciousness that solving the usual type of written problem is unprofitable. Written problems have been mere "busy work" unrelated to the real number situations required in life. They have presented conditions which call for aimless figuring upon impossible sets of numbers. Written problems should help children interpret the real number conditions they are likely to encounter; they should help children apply number work when it is actually needed. There should be little place in our school for the isolated textbook problem which has been so common. Rather, problems should be developed in relation to some larger situation which has been clearly defined and is understood by the children. In the future we can expect that problems will no longer be used as a cloak for drill and computation but as an aid in developing information which will clarify important social and technical concepts.

All these changes in arithmetic are in the right direction. If they are generally accepted and practiced, arithmetic will emerge from its cloud of suspicion. After all, the difficulty lies not with arithmetic itself but with the false aims and purposes which have guided the program. Number concepts and number skills are an integral part of life, even the life of the little child. With its more functional adaptation arithmetic has a definite and honorable place in the modern curriculum.

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